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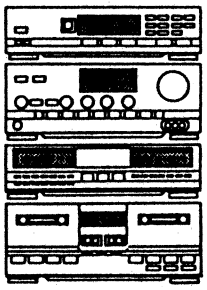
AIWA®

CUD/CUM/CUDP-909
CU/CUP-D900

SERVICE MANUAL



STEREO SYSTEM

• BASIC TAPE MECHANISM : TN – 1800 • TYPE. U,E,K,Z

CENTER SYSTEM	AMPLIFIER	CASSETTE DECK	TUNER	GRAPHIC EQUALIZER	REMOTE CONTROLLER	SPEAKER	CD PLAYER	TURNTABLE
CU – D900 (U)	MX – D9	FX – W808	TX – D9F	GE – D9	RC – T9F	SX – U9 ※4	DX – D9 ※1 (OPTIONAL)	PX – ED9 ※3 (OPTIONAL)
CUP – D900 (U)	MX – D9	FX – W808	TX – D9F	GE – D9	RC – T9F	SX – U9 ※4	DX – D9 ※1 (OPTIONAL)	PX – ED9 ※3
CUD – 909 (U)	MX – D909	FX – W808	TX – D9F	GE – D9	RC – T909F	SX – U9 ※4	DX – M909 ※2	PX – ED9 ※3 (OPTIONAL)
CUDP – 909 (U)	MX – D909	FX – W808	TX – D9F	GE – D9	RC – T909F	SX – U9 ※4	DX – M909 ※2	PX – ED9 ※3
CUM – 909 (E)	MX – D909	FX – W909	TX – D9L ※4	GE – D9 ※4	RC – T909L	SX – E9 ※4	DX – M909 ※2	PX – ED9 ※3 (OPTIONAL)
(E)	MX – D9	FX – W9	TX – D9L	GE – D9	RC – T9L	SX – E9	DX – D9 ※1 (OPTIONAL)	PX – ED9 ※3 (OPTIONAL)
(K)	MX – D9	FX – W909	TX – D9L	GE – D9	RC – T9L	SX – E9	DX – D9 ※1 (OPTIONAL)	PX – ED9 ※3 (OPTIONAL)
(Z)	MX – D9	FX – W9	TX – D9L	GE – D9	RC – T9L	SX – E9	DX – D9 ※1 (OPTIONAL)	PX – ED9 ※3 (OPTIONAL)

※1 As to the service information of DX – D9.
See the individual service manual of DX – D9.

※2 As to the service information of DX – M909.
See the individual service manual of DX – M909/M779/M745.

※3 As to the service information of PX – ED9 (Turntable system).
See the individual service manual of PX – ED9.

※4 CENTER SYSTEM does not have ※4.

AIWA Co., Ltd. Tokyo Japan

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SPECIFICATIONS

AMPLIFIER MX-D9, D909

Power output	E,K,Z: 80W+80W (6 ohms, T.H.D. 1%, 1kHz) (FTC rule)
	U: 100 Watts per channel, Min. RMS at 6 ohms, from 25Hz - 20kHz, with no more than 0.9% Total Harmonic Distortion
Input sensitivity (load impedance)	
	PHONO: 4mV (47 kohms)
	E,K,Z: VIDEO 1/DAT, VIDEO 2, VIDEO 3 IN (AUDIO): 250mV (47 kohms)
	U: VCR/DAT: 250mV (47 kohms)
Signal-to-noise-ratio	90dB
Power requirements	
	E,Z: 220V AC, 50Hz
	K: 240V AC, 50Hz
	U: 120V AC,60Hz
Power consumption	
	E,K,Z: 430W (System total 460W)
	U: 190W (System total 220W)
Dimensions	360(W)×136(H)×321(D)mm
Weight	E,K,Z: 8.1kg
	U: 9kg

CASSETTE DECK FX-W9, W909, W808

Track format	4 tracks, 2 channels
Frequency response	
	METAL tape: 20 - 17,000Hz
	CrO_2 tape: 20 - 16,000Hz
	NORMAL tape: 20 - 15,000Hz
Signal-to-noise ratio	
	70dB (DOLBY NR C-ON, METAL tape, peak level)
Wow and flutter	0.09% (WRMS)
Tape speed	4.8cm/sec. (1-7/8 ips)
	9.5cm/sec. (double speed)
Rewind time	120sec. (C-60)
Fast forward time	120sec. (C-60)
Recording system	AC bias
Erase system	AC erase
Motor	DC servomotor×2
Heads	Playback head×1 (deck 1)
	Record/playback/erase head×1 (deck 2)
Dimensions	360(W)×136(H)×300(D)mm
Weight	3.7kg

TUNER TX-D9F, TX-D9L

<FM section>	
Frequency range	87.5MHz to 108MHz
Usable sensitivity (IHF)	
	E,K,U: 1.6μV (75ohms) 15.2dBf
	Z: 1.4μV (75ohms)
Alternate channel selectivity	
	50dB (±400kHz)
Signal-to-noise ratio	
	70dB (STEREO) 78dB (MONO)
Image response ratio	
	45dB
Frequency response	
	20Hz to 15kHz (+0.5dB, -3dB)
Stereo separation	40dB at 1kHz
Antenna	75 ohms (unbalanced)
<AM(MW) section>	
Frequency range	E,K,Z: MW 530kHz to 1,605kHz
	U: AM 530kHz to 1,700kHz
Usable sensitivity	E,K,Z: 400μV/m
	U: 300μV/m
Selectivity	E,K,Z: 23dB (9kHz)
	U: 23dB (10kHz)
Signal-to-noise ratio	53dB (100dB input)
Antenna	Loop antenna
<LW section> (E,K,Z models only)	
Frequency range	150kHz to 285kHz
Sensitivity	1,000μV/m
Antenna	Loop antenna
<Timer section and general>	
Program timer	"Once" and/or "every"
Sleep timer	Capable of setting in 10 minute increments, 99 minutes maximum
Dimensions	E,K,Z: 360(W)×76(H)×310(D)mm
	U: 360(W)×76(H)×307(D)mm
Weight	2.2kg

GRAPHIC EQUALIZER GE-D9

Input	250mV (47 kohms)
Output	250mV (47 kohms)
Dimensions	360(W)×86(H)×298(D)mm
Weight	2.3kg

SPEAKER SX-E9, U9

Cabinet type	Bass reflex	
Speaker	SX-E9	220mm cone type woofer
		60mm cone type tweeter
		40mm ceramic type tweeter
	SX-U9	200mm cone type woofer
		65mm cone type tweeter
		50mm ceramic type tweeter
Impedance	6 ohms	
Music power	SX-E9	120W
	SX-U9	150W
Output sound pressure level	89dB/W/m	
Frequency response	40Hz to 20kHz	
Dimensions	SX-E9	296(W)×520(H)×230(D)mm
	SX-U9	290(W)×520(H)×240(D)mm
Weight	7.0kg	

COMMON SECTION

Dimensions	E,K,Z: 952(W)×520(H)×321(D)mm (Vertical placement) 1,312(W)×520(H)×321(D)mm (Horizontal placement)
	U: 940(W)×520(H)×321(D)mm (Vertical placement) 1,300(W)×520(H)×321(D)mm (Horizontal placement)
Weight	E,K,Z: 30.3kg
	U: 31.2kg

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MODEL NO.

MX – D9,D909

ELECTRICAL MAIN PARTS LIST (MX – D9, D909)

REF.NO.	PART NO.	DESCRIPTION
⚠	*87-033-147-019	FUSE CLAMP
C601	*87-010-399-010	CAP,ELECT 3300-35V SME
C602	*87-010-399-010	CAP,ELECT 3300-35V SME
C604	*87-010-410-019	CAP,ELECT 330-50VX(E,K,Z)
C604	*87-010-768-010	CAP,ELECT 330-50KME(U)
C605	*87-010-453-019	CAP,ELECT 4700-25V
C606	*87-010-408-019	CAP,ELECT 47-50VX
C607	*87-010-544-019	CAP,ELECT 0.1-50
C608	*87-010-405-019	CAP,ELECT 10-50SME
C610	*87-010-403-019	CAP,ELECT 3.3-50SME
C612	*87-010-101-019	CAP,ELECT 220-16 SME(EXCEPT FOR U)
C613	*87-010-408-019	CAP,ELECT 47-50VX
C614	*87-010-408-019	CAP,ELECT 47-50VX
C615	*87-010-405-019	CAP,ELECT 10-50SME
C616	*87-010-405-019	CAP,ELECT 10-50SME
C617	*87-010-405-019	CAP,ELECT 10-50SME
C618	*87-010-402-019	CAP,ELECT 2.2-50SME
C619	*87-010-405-019	CAP,ELECT 10-50SME
C620	*87-010-764-019	CAP,ELECT 47-63V
C621	*87-010-764-019	CAP,ELECT 47-63V
C622	*87-018-134-019	CAP,CERA-SOL SS 0.01(D9E,Z)
C623	*87-018-134-019	CAP,CERA-SOL SS 0.01(D9E,Z)
C625	*87-010-045-019	CAP,ELECT 100-25V(U)
C625	*87-010-101-019	CAP,ELECT 220-16(E,K,Z)
C626	*87-015-457-019	CAP,ELECT 47-16V(BP)
C631	*87-010-405-019	CAP,ELECT 10-50SME
C632	*87-010-405-019	CAP,ELECT 10-50SME
C633	*87-010-405-019	CAP,ELECT 10-50SME
C634	*87-010-404-019	CAP,ELECT 4.7-50SME
C650	*87-018-115-019	CAP,CERA-SOL 47P
C651	*87-018-115-019	CAP,CERA-SOL 47P
C652	*87-018-115-019	CAP,CERA-SOL 47P
C701	*87-010-260-010	CAP,ELECT 47-25V SME
C702	*87-010-260-010	CAP,ELECT 47-25V SME
C703	*87-010-401-019	CAP,ELECT 1-50SME
C704	*87-010-401-019	CAP,ELECT 1-50SME
C705	*87-018-100-019	CAP,CERA-SOL SS 4.7P
C706	*87-018-100-019	CAP,CERA-SOL SS 4.7P
C707	*87-010-405-019	CAP,ELECT 10-50SME
C708	*87-010-405-019	CAP,ELECT 10-50SME
C713	*87-018-103-019	CAP,CERA-SOL SS 8.2P
C714	*87-018-103-019	CAP,CERA-SOL SS 8.2P
C715	*87-010-404-019	CAP,ELECT 4.7-50SME
C716	*87-010-404-019	CAP,ELECT 4.7-50SME
C717	*87-010-260-010	CAP,ELECT 47-25V SME
C718	*87-010-260-010	CAP,ELECT 47-25V SME
C719	*87-010-401-019	CAP,ELECT 1-50SME
C720	*87-010-401-019	CAP,ELECT 1-50SME
C721	*87-010-404-019	CAP,ELECT 4.7-50SME
C722	*87-010-404-019	CAP,ELECT 4.7-50SME
C725	*87-010-404-019	CAP,ELECT 4.7-50SME
C726	*87-010-404-019	CAP,ELECT 4.7-50SME
C727	*87-010-401-019	CAP,ELECT 1-50SME
C728	*87-010-401-019	CAP,ELECT 1-50SME
C729	*87-018-127-019	CAP,CERA-SOL SS 470P
C730	*87-018-127-019	CAP,CERA-SOL SS 470P
C731	*87-010-260-019	CAP,ELECT 47-25V SME(U)
C731	*87-010-408-019	CAP,ELECT 47-50SME(E,K,Z)
C732	*87-010-260-019	CAP,ELECT 47-25V SME(U)
C732	*87-010-408-019	CAP,ELECT 47-50SME(E,K,Z)
C741	*87-018-134-019	CAP,CERA-SOL SS 0.01
C742	*87-018-134-019	CAP,CERA-SOL SS 0.01
C760	*87-018-134-019	CAP,CERA-SOL SS 0.01(E,K,Z)
C761	*87-010-405-019	CAP,ELECT 10-50SME
C762	*87-010-405-019	CAP,ELECT 10-50SME
C764	*87-010-405-010	CAP,ELECT 10-50SME(D9E,Z)
C765	*87-018-131-019	CAP,CERA-SOL SS 1000P
C768	*87-010-408-019	CAP,ELECT 47-50VX
C791	*87-010-401-019	CAP,ELECT 1-50SME
C792	*87-010-401-019	CAP,ELECT 1-50SME
C843	*87-018-127-019	CAP,CERA-SOL SS 470P
C844	*87-018-127-019	CAP,CERA-SOL SS 470P
C851	*87-018-134-019	CAP,CERA-SOL SS 0.01
C852	*87-010-265-019	CAP,ELECT 33-16V(U)
C902	*87-010-385-019	CAP,ELECT 220-25V
C903	*87-010-405-019	CAP,ELECT 10-50V

REF.NO.	PART NO.	DESCRIPTION
⚠ IC		
	87-001-443-010	IC,ASP8801
	87-001-440-019	IC,BA15218N
	87-001-523-019	IC,BA7001(E,K,Z)
	87-001-344-019	IC,HD14001BP
	87-001-347-019	IC,HD14051BP
	87-001-350-019	IC,HD14052BP
	87-001-198-019	IC,HD14066BP
	81-689-627-010	IC,LC6554H-4175(E,K,Z)
	83-340-640-010	IC,M50726-278SP(U)
	87-020-488-010	IC,M5278L12
	87-020-680-019	IC,NJM2068S
	87-020-758-019	IC,NJM2068SD
	87-001-769-010	IC,STK4214-2(E,K,Z)
	87-001-724-019	IC,STK4234-2(U)
	87-020-943-019	IC,TC9176P
⚠ TRANSISTOR		
	89-502-465-019	FET,2SK246GR
	89-110-155-019	TRANSISTOR,2SA1015(GR)
	89-213-750-019	TRANSISTOR,2SB1375
	89-309-456-019	TRANSISTOR,2SC945LP
	89-313-835-019	TRANSISTOR,2SC1383NC Q
	89-320-011-019	TRANSISTOR,2SC2001K
	89-326-035-019	TRANSISTOR,2SC2603F(E,K,Z)
	89-417-612-019	TRANSISTOR,2SD1761E
	87-026-269-019	TRANSISTOR,DTA114ES
	87-026-214-019	TRANSISTOR,DTA114YS
	87-026-288-019	TRANSISTOR,DTA143XS(U)
	87-026-219-019	TRANSISTOR,DTA144ES
	87-026-215-010	TRANSISTOR,DTC114YS
	87-026-490-019	TRANSISTOR,DTC123ES(U)
	87-026-217-019	TRANSISTOR,DTC124ES
	87-026-218-019	TRANSISTOR,DTC144ES
⚠ DIODE		
	87-020-691-019	DIODE,1SS132
	87-001-749-010	DIODE,D5SB20
	87-020-123-019	DIODE,DS446
	87-020-992-019	DIODE,MPG06 D
	87-001-770-010	DIODE,P6000F(U)
	87-027-455-010	DIODE,S2V20F
	87-001-833-010	DIODE,SB340F(E,K,Z)
	87-027-472-019	DIODE,ZENER HZ30L1
	87-027-301-019	DIODE,ZENER HZ3A1
	87-027-393-019	DIODE,ZENER HZ4C2
	87-027-475-019	DIODE,ZENER HZ6B1
	87-027-583-019	DIODE,ZENER HZ9B1L
	87-027-821-019	DIODE,ZENER RD2.0EB
⚠ MAIN CIRCUIT BOARD SECTION		

REF.NO.	PART NO.	DESCRIPTION
C904	*87-010-755-010	CAP,ELECT 8200-56V
C905	*87-010-755-010	CAP,ELECT 8200-56V
C908	*87-010-405-019	CAP,ELECT 10-50V
C909	*87-010-260-019	CAP,ELECT 47-25V
C910	*87-010-409-019	CAP,ELECT 220-50V SME
C955	*87-010-263-019	CAP,ELECT 100-10V
C982	*87-010-401-019	CAP,ELECT 1-50V(U)
⚠F2	87-035-301-010	FUSE,2.5A(U)
⚠F2	87-035-366-010	FUSE,T2.5A 250V(E,K,Z)
⚠F3	87-035-301-010	FUSE,2.5A(U)
⚠F3	87-035-366-010	FUSE,T2.5A 250V(E,K,Z)
⚠F4	87-035-303-010	FUSE,4A UL(U)
⚠F4	87-035-367-010	FUSE,T3.15A 250V T(E,K,Z)
⚠F5	87-035-303-010	FUSE,4A UL(U)
⚠F5	87-035-367-010	FUSE,T3.15A 250V T(E,K,Z)
J507	87-009-065-010	FG CONNECTOR 15P(1 GEQ)
J508	87-009-064-019	FG CONNECTOR 13P(3 DECK)
J509	87-009-063-019	FG CONNECTOR 11P(4 TUNER)
J510	87-009-064-019	FG CONNECTOR 13P(2 CD)
J602	*87-033-197-019	TERMINAL,SP-4P 2(SPEAKERS)
L901	*87-003-136-019	COIL,100UH
L997	*87-005-366-010	COIL,1UH(Z)
L998	*87-005-366-010	COIL,1UH(Z)
⚠R605	87-029-126-019	RES,FUSIBLE 1-1W(F)
⚠R606	87-029-126-019	RES,FUSIBLE 1-1W(F)
⚠R634	87-029-089-019	RES,FUSIBLE 4.7-1/4W
⚠R635	87-029-089-019	RES,FUSIBLE 4.7-1/4W
⚠R665	87-029-105-019	RES,FUSIBLE 10-1/2W
⚠R666	87-029-105-019	RES,FUSIBLE 10-1/2W
⚠R913	87-029-105-010	RES,FUSIBLE 10-1/2W
⚠R993	87-029-108-019	RES,FUSIBLE 1-1/2W
RY601	87-045-280-010	RELAY G5R12V SP
RY603	87-045-285-010	RELAY VB12MB
RY604	87-045-201-010	RELAY G2R12V
=== FRONT CIRCUIT BOARD SECTION === (U ONLY)		
C101	*87-010-404-019	CAP,ELECT 4.7-50SME
C102	*87-010-404-019	CAP,ELECT 4.7-50SME
C103	*87-010-403-019	CAP,ELECT 3.3-50SME
C104	*87-010-403-019	CAP,ELECT 3.3-50SME
C109	*87-018-199-019	CAP,CERA-SOL 3300P
C110	*87-018-199-019	CAP,CERA-SOL 3300P
C113	*87-018-129-010	CAP,CERA-SOL 680P
C114	*87-018-129-010	CAP,CERA-SOL 680P
C115	*87-010-260-019	CAP,ELECT 47-25V SME
C116	*87-010-260-019	CAP,ELECT 47-25V SME
C117	*87-010-404-019	CAP,ELECT 4.7-50SME
C118	*87-010-404-019	CAP,ELECT 4.7-50SME
C119	*87-010-401-019	CAP,ELECT 1-50SME
C120	*87-010-401-019	CAP,ELECT 1-50SME
C121	*87-018-123-019	CAP,CERA-SOL SS 220P
C122	*87-018-123-019	CAP,CERA-SOL SS 220P
C123	*87-010-402-019	CAP,ELECT 2.2-50SME
C124	*87-010-402-019	CAP,ELECT 2.2-50SME
C127	*87-010-404-010	CAP,ELECT 4.7-50SME
C128	*87-010-404-019	CAP,ELECT 4.7-50SME
C129	*87-010-401-019	CAP,ELECT 1-50SME
C130	*87-010-401-019	CAP,ELECT 1-50SME
C133	*87-018-167-019	CAP,CERA-SOL 4.7P UJ
C134	*87-018-167-019	CAP,CERA-SOL 4.7P UJ
C801	*87-010-549-019	CAP,ELECT 0.33-50
C802	*87-018-134-019	CAP,CERA-SOL 0.01
C803	*87-010-384-019	CAP,ELECT 100-25
C804	*87-010-384-019	CAP,ELECT 100-25
C805	*87-018-134-019	CAP,CERA-SOL 0.01
C806	*87-010-264-019	CAP,ELECT 100-10 SRE
C807	*87-010-264-019	CAP,ELECT 100-10 SRE
C808	*87-018-134-019	CAP,CERA-SOL 0.01
C809	*87-010-264-019	CAP,ELECT 100-10 SRE
C810	*87-018-134-019	CAP,CERA-SOL 0.01
C812	*87-018-134-019	CAP,CERA-SOL 0.01
C813	*87-010-264-019	CAP,ELECT 100-10 SRE
CF801	*87-030-181-019	CERALOCK CST 2.5 MHZ
L801	*87-003-045-019	COIL,CHOKE 22UH
L802	*87-003-045-019	COIL,CHOKE 22UH
L803	*87-003-045-019	COIL,CHOKE 22UH
L804	*87-005-126-019	COIL 1MMH
LED1	87-001-124-019	LED SLZ 381C(CD/DAT DIRECT)
LED2	87-001-124-019	LED SLZ 381C(CD/DAT DIRECT)
LED3	87-001-124-019	LED SLZ 381C(DSL)
LED4	87-001-124-019	LED SLZ 381C(DSL)
LED5	87-001-124-019	LED SLZ 381C(BBE)
LED6	87-001-124-019	LED SLZ 381C(BBE)
LED807	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.11-12)
LED808	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.10-11)
LED809	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.9-10)
LED810	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.8-9)
LED811	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.7-8)
LED812	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.6-7)
LED813	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.5-6)
LED814	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.4-5)
LED815	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.3-4)
LED816	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.2-3)
LED817	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.1-2)
LED818	87-001-123-019	LED SLZ 981C-02T1(VOL.INDI.0 MUTE)
LED819	87-001-124-019	LED SLZ 381C(TAPE)
LED820	87-001-124-019	LED SLZ 381C(TUNER)
LED821	87-001-124-019	LED SLZ 381C(PHONO)
LED822	87-001-124-019	LED SLZ 381C(CD)
LED823	87-001-124-019	LED SLZ 381C(VCR/DAT)
LED824	87-001-123-019	LED SLZ 981C-02T1(SURROUND)
SW801	87-036-142-010	TACT SW(POWER)
SW802	87-036-142-010	TACT SW(VOLUME UP)
SW803	87-036-142-010	TACT SW(VOLUME DOWN)
SW804	87-036-142-010	TACT SW(CD/DAT DIRECT)
SW805	87-036-142-010	TACT SW(BBE)
SW806	87-036-142-010	TACT SW(DSL)
SW807	87-036-142-010	TACT SW(SURROUND)
SW808	87-036-142-010	TACT SW(TAPE)
SW809	87-036-142-010	TACT SW(TUNER)
SW810	87-036-142-010	TACT SW(PHONO)
SW811	87-036-142-010	TACT SW(CD)
SW812	87-036-142-010	TACT SW(VCR/DAT)
SW813	87-036-142-010	TACT SW(MUTE/WAKE UP)
VR1	81-689-623-010	VOLUME 50KB(BBE)
VR2	81-689-621-010	VOLUME 20KC(DSL)
VR3	81-689-622-010	VOLUME 50KC(BASS)
VR4	81-689-622-010	VOLUME 50KC(TREBLE)
VR5	81-626-624-019	VOLUME 50KW(BALANCE)
=== FRONT CIRCUIT BOARD SECTION === (E, K, Z ONLY)		
C1	*87-010-265-019	CAP,ELECT 33-16SME
C6	*87-010-546-019	CAP,ELECT 0.33-50V SME
C7	*87-010-260-019	CAP,ELECT 47-25V SME
C8	*87-018-134-019	CAP,CERA-SOL SS 0.01
C9	*87-018-134-019	CAP,CERA-SOL SS 0.01
C10	*87-018-131-019	CAP,CERA-SOL SS 1000P
C101	*87-010-404-019	CAP,ELECT 4.7-50SME

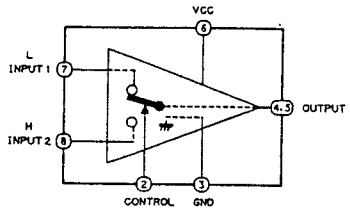
REF.NO.	PART NO.	DESCRIPTION
C102	*87-010-404-019	CAP,ELECT 4.7-50SME
C103	*87-010-403-019	CAP,ELECT 3.3-50SME
C104	*87-010-403-019	CAP,ELECT 3.3-50SME
C109	*87-018-199-019	CAP,CERA-SOL 3300P
C110	*87-018-199-019	CAP,CERA-SOL 3300P
C113	*87-018-129-010	CAP,CERA-SOL 680P
C114	*87-018-129-010	CAP,CERA-SOL 680P
C115	*87-010-260-019	CAP,ELECT 47-25V SME
C116	*87-010-260-019	CAP,ELECT 47-25V SME
C117	*87-010-404-019	CAP,ELECT 4.7-50SME
C118	*87-010-404-019	CAP,ELECT 4.7-50SME
C119	*87-010-401-019	CAP,ELECT 1-50SME
C120	*87-010-401-019	CAP,ELECT 1-50SME
C121	*87-018-123-019	CAP,CERA-SOL SS 220P
C122	*87-018-123-019	CAP,CERA-SOL SS 220P
C123	*87-010-402-019	CAP,ELECT 2.2-50SME
C124	*87-010-402-019	CAP,ELECT 2.2-50SME
C127	*87-010-404-010	CAP,ELECT 4.7-50SME
C128	*87-010-404-019	CAP,ELECT 4.7-50SME
C129	*87-010-401-019	CAP,ELECT 1-50SME
C130	*87-010-401-019	CAP,ELECT 1-50SME
C133	*87-018-167-019	CAP,CERA-SOL 4.7P UJ
C134	*87-018-167-019	CAP,CERA-SOL 4.7P UJ
CF1	*87-030-167-019	CERALOCK CST 4.0 MHZ
FL1	81-689-620-010	FL-9-BT-49GK(DISPLAY)
L1	*87-003-045-019	COIL,CHOKE 22UH
L2	*87-003-045-019	COIL,CHOKE 22UH
L3	*87-003-050-019	COIL,CHOKE 47UH
LED1	87-001-124-019	LED SLZ 381C(CD/DAT DIRECT)
LED2	87-001-124-019	LED SLZ 381C(CD/DAT DIRECT)
LED3	87-001-124-019	LED SLZ 381C(DSL)
LED4	87-001-124-019	LED SLZ 381C(DSL)
LED5	87-001-124-019	LED SLZ 381C(BBE)
LED6	87-001-124-019	LED SLZ 381C(BBE)
SW1	87-036-142-010	TACT SW(POWER)
SW2	87-036-142-010	TACT SW(CD/DAT DIRECT)
SW3	87-036-142-010	TACT SW(BBE)
SW4	87-036-142-010	TACT SW(DSL)
SW5	87-036-142-010	TACT SW(VOLUME UP)
SW6	87-036-142-010	TACT SW(VOLUME DOWN)
SW7	87-036-142-010	TACT SW(TAPE)
SW8	87-036-142-010	TACT SW(TUNER)
SW9	87-036-142-010	TACT SW(PHONO)
SW10	87-036-142-010	TACT SW(CD)
SW11	87-036-142-010	TACT SW(VIDEO 1/DAT)
SW12	87-036-142-010	TACT SW(VIDEO 2)
SW13	87-036-142-010	TACT SW(VIDEO 3)
SW14	87-036-142-010	TACT SW(MUTE/WAKE UP)
SW15	87-036-142-010	TACT SW(SURROUND)
VR1	81-689-623-019	VOLUME 50KB(BBE)
VR2	81-689-621-019	VOLUME 20KC(DSL)
VR3	81-689-622-019	VOLUME 50KC(TREBLE)
VR4	81-689-622-019	VOLUME 50KC(BASS)
VR5	81-626-624-019	VOLUME 50KW(BALANCE)
=== FUNCTION CIRCUIT BOARD SECTION ===		
C201	*87-010-404-019	CAP,ELECT 4.7-50SME
C202	*87-010-404-019	CAP,ELECT 4.7-50SME
C203	*87-010-404-019	CAP,ELECT 4.7-50SME
C204	*87-010-404-019	CAP,ELECT 4.7-50SME
C205	*87-018-134-019	CAP,CERA-SOL SS 0.01
C206	*87-018-134-019	CAP,CERA-SOL SS 0.01
C207	*87-018-134-019	CAP,CERA-SOL SS 0.01
C208	*87-018-134-019	CAP,CERA-SOL SS 0.01
C209	*87-018-134-019	CAP,CERA-SOL SS 0.01
C210	*87-018-134-019	CAP,CERA-SOL SS 0.01
C211	*87-010-260-019	CAP,ELECT 47-25V SME
C212	*87-010-260-019	CAP,ELECT 47-25V SME
C213	*87-010-260-019	CAP,ELECT 47-25V SME
C214	*87-010-260-019	CAP,ELECT 47-25V SME
C401	*87-018-121-010	CAP,CERA-SOL SS 150P
C402	*87-018-121-010	CAP,CERA-SOL SS 150P
C403	*87-010-404-019	CAP,ELECT 4.7-50SME
C404	*87-010-404-019	CAP,ELECT 4.7-50SME
C405	*87-018-115-019	CAP,CERA-SOL SS 47P
C406	*87-018-115-019	CAP,CERA-SOL SS 47P
C407	*87-010-260-019	CAP,ELECT 47-25V SME
C408	*87-010-260-019	CAP,ELECT 47-25V SME
C413	*87-010-404-019	CAP,ELECT 4.7-50SME
C414	*87-010-404-019	CAP,ELECT 4.7-50SME
C415	*87-010-260-019	CAP,ELECT 47-25V SME
C416	*87-010-260-019	CAP,ELECT 47-25V SME
C501	*87-010-401-019	CAP,ELECT 1-50SME
C502	*87-010-401-019	CAP,ELECT 1-50SME
C503	*87-010-401-019	CAP,ELECT 1-50SME
C504	*87-010-401-019	CAP,ELECT 1-50SME
C507	*87-018-132-019	CAP,CERA-SOL SS 2200P
C508	*87-018-132-019	CAP,CERA-SOL SS 2200P
C513	*87-018-109-019	CAP,CERA-SOL SS 22P
C514	*87-018-109-019	CAP,CERA-SOL SS 22P
C515	*87-010-545-019	CAP,ELECT 0.22-50SME
C516	*87-010-545-019	CAP,ELECT 0.22-50SME
C517	*87-010-401-019	CAP,ELECT 1-50SME
C518	*87-010-401-019	CAP,ELECT 1-50SME
C521	*87-010-405-019	CAP,ELECT 10-50SME
C522	*87-010-405-019	CAP,ELECT 10-50SME
C523	*87-010-405-019	CAP,ELECT 10-50SME
C524	*87-010-405-019	CAP,ELECT 10-50SME
C525	*87-010-404-019	CAP,ELECT 4.7-50SME
C526	*87-010-404-019	CAP,ELECT 4.7-50SME
C533	*87-010-401-019	CAP,ELECT 1-50SME
C534	*87-010-401-019	CAP,ELECT 1-50SME
C535	*87-010-401-019	CAP,ELECT 1-50SME
C536	*87-010-401-019	CAP,ELECT 1-50SME
C537	*87-010-401-019	CAP,ELECT 1-50SME
C538	*87-010-401-019	CAP,ELECT 1-50SME
C539	*87-018-134-019	CAP,CERA-SOL SS 0.01
C540	*87-018-134-019	CAP,CERA-SOL SS 0.01
C541	*87-010-260-019	CAP,ELECT 47-25V SME
C542	*87-010-260-019	CAP,ELECT 47-25V SME
C997	*87-012-110-019	CAP,CERA 270P BEAD(Z)
C998	*87-012-110-019	CAP,CERA 270P BEAD(Z)
J201-1	*87-009-057-019	JACK,PIN 6P(VCR/DAT L)(U)
J201-2	+++	JACK,PIN 6P(VCR/DAT R)(U)
J201-3	+++	JACK,PIN 6P(REC OUT L)(U)
J201-4	+++	JACK,PIN 6P(REC OUT R)(U)
J201-5	+++	JACK,PIN 6P(PHONO L)(U)
J201-6	+++	JACK,PIN 6P(PHONO R)(U)
J201-1	*87-009-056-019	JACK,PIN 4P(VIDEO1/DAT L IN)(E,K,Z)
J201-2	+++	JACK,PIN 4P(VIDEO1/DAT R IN)(E,K,Z)
J201-3	+++	JACK,PIN 4P(VIDEO1/DAT L OUT)(E,K,Z)
J201-4	+++	JACK,PIN 4P(VIDEO1/DAT R OUT)(E,K,Z)
J202-1	*87-009-057-019	JACK,PIN 6P(VIDEO 2 L IN)(E,K,Z)
J202-2	+++	JACK,PIN 6P(VIDEO 2 R IN)(E,K,Z)
J202-3	+++	JACK,PIN 6P(VIDEO 2 L OUT)(E,K,Z)
J202-4	+++	JACK,PIN 6P(VIDEO 2 R OUT)(E,K,Z)
J202-5	+++	JACK,PIN 6P(PHONO L)(E,K,Z)
J202-6	+++	JACK,PIN 6P(PHONO R)(E,K,Z)

REF.NO.	PART NO.	DESCRIPTION
SFR1	*87-024-172-019	SFR 10K
SFR2	*87-024-172-019	SFR 10K
=== VIDEO CONTROL CIRCUIT BOARD SECTION === (E, K, Z ONLY)		
C301	*87-010-265-019	CAP,ELECT 33-16SME
C302	*87-010-265-019	CAP,ELECT 33-16SME
C303	*87-010-265-019	CAP,ELECT 33-16SME
C304	*87-010-260-019	CAP,ELECT 47-25V SME
C305	*87-010-260-019	CAP,ELECT 47-25V SME
C306	*87-010-381-019	CAP,ELECT 330-16SME
C307	*87-010-381-019	CAP,ELECT 330-16SME
C308	*87-010-260-019	CAP,ELECT 47-25V SME
C309	*87-010-263-019	CAP,ELECT 100-10V
C310	*87-010-384-019	CAP,ELECT 100-25SME
C311	*87-018-134-019	CAP,CERA-SOL SS 0.01
C312	*87-018-134-019	CAP,CERA-SOL SS 0.01
C313	*87-018-134-019	CAP,CERA-SOL SS 0.01
J301-1	*87-009-055-019	PIN JACK 4P(Y)(VIDEO 1 IN)
J301-2	+++	PIN JACK 4P(Y)(VIDEO 1 OUT)
J301-3	+++	PIN JACK 4P(Y)(MONITOR OUT)
J301-4	+++	PIN JACK 4P(Y)(VIDEO 2 IN)
L301	*87-003-050-019	COIL,CHOKE 47UH
=== JACK CIRCUIT BOARD SECTION ===		
J701	81-669-655-010	JACK 6.3 W/S(PHONES)
R739	*87-025-311-010	RES,MFO 1W-220
R740	*87-025-311-010	RES,MFO 1W-220
=== SURROUND CIRCUIT BOARD SECTION ===		
J601-1	*81-689-655-019	PIN JACK 2P(SURR,SPEAKERS L)
J601-2	+++	PIN JACK 2P(SURR,SPEAKERS R)
RY602	87-045-258-010	RELAY G4U-12V
=== POWER CIRCUIT BOARD SECTION ===		
⚠	*87-033-147-019	FUSE CLAMP
⚠F1	87-035-313-010	FUSE 5A(U)
⚠F1	87-035-366-010	FUSE T2.5A 250V(E,K,Z)
=== VIDEO 3 CIRCUIT BOARD SECTION === (E, K, Z ONLY)		
C341	*87-018-134-019	CAP,CERA-SOL SS 0.01
C342	*87-018-134-019	CAP,CERA-SOL SS 0.01
J302-1	*81-689-656-019	JACK,PIN 3P(VIDEO 3 R)
J302-2	+++	JACK,PIN 3P(VIDEO 3 L)
J302-3	+++	JACK,PIN 3P(VIDEO 3 V)
=== MISCELLANEOUS ===		
⚠	*87-034-589-019	AC CORD U(U)
⚠	*82-187-797-019	AC CORD E(E,Z)
⚠	82-187-796-019	AC CORD BS(K)
⚠	87-085-189-010	AC CORD BUSHING(U)
⚠	87-085-185-010	AC CORD BUSHING(E)(E,K,Z)
⚠PT1	81-689-607-019	POWER TRANSFORMER U(U)
⚠PT1	81-689-608-019	POWER TRANSFORMER E(E,Z)
⚠PT1	81-689-609-019	POWER TRANSFORMER K(K)
⚠SW101	87-036-116-019	SEESAW SW(POWER)(E,K,Z)

IC BLOCK DIAGRAM – 1

TRUTH TABLE (MX – D9,D909)

IC,BA7001

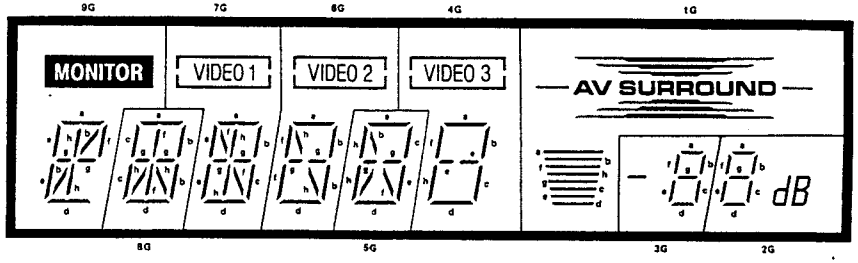


IC,HD14052

CONTROL INPUT			CHANNEL IN/OUT SWITCH OF COMMON TERMINAL			
INHIBIT	B	A	X0	X1	X2	X3
0	0	0	ON	OFF	OFF	OFF
0	0	1	OFF	ON	OFF	OFF
0	1	0	OFF	OFF	ON	OFF
0	1	1	OFF	OFF	OFF	ON
1	X	X	OFF	OFF	OFF	OFF

※ X : DONT CARE

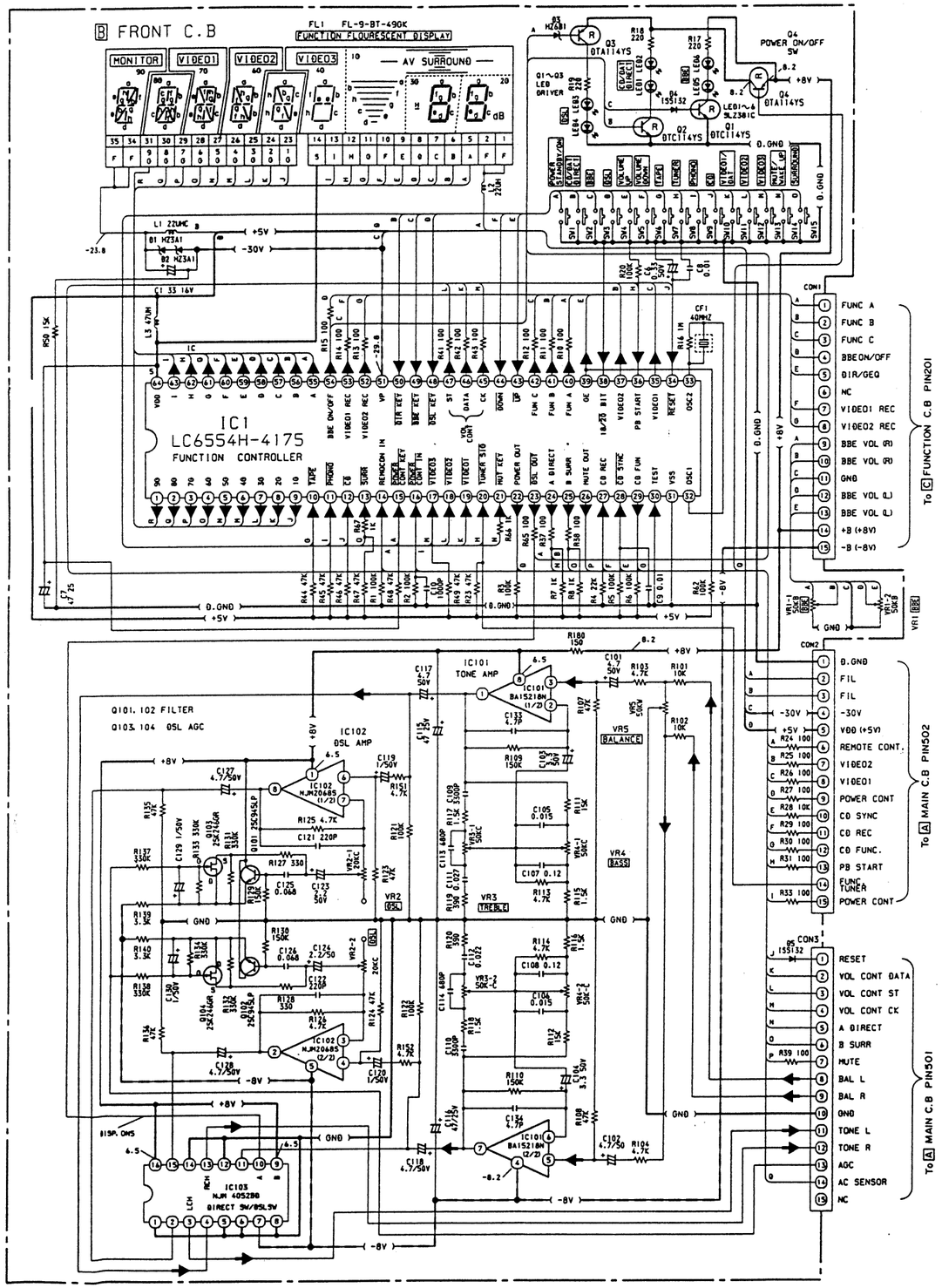
FL DISPLAY,9 – BT – 49GK (MX – D9,D909)

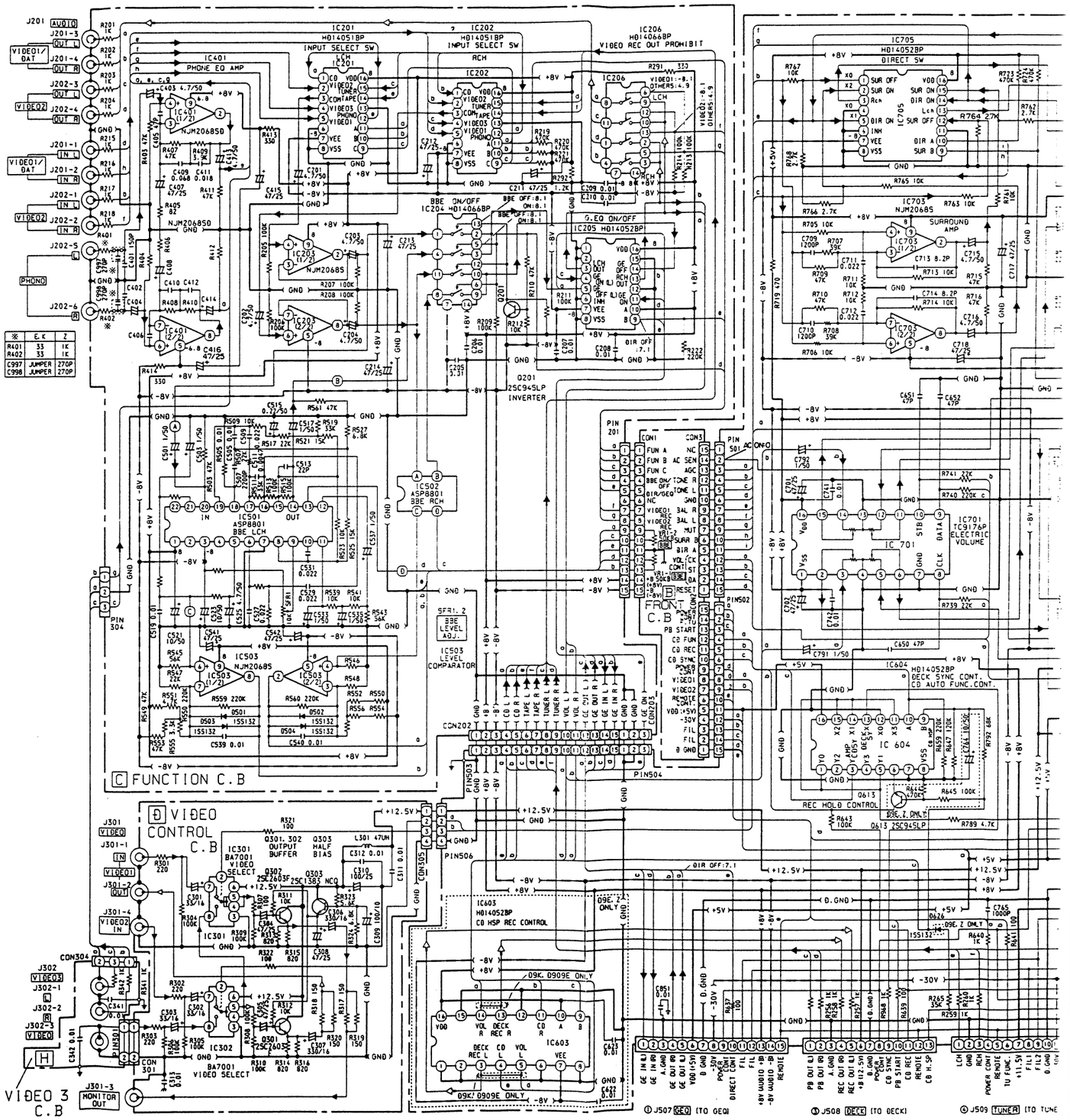


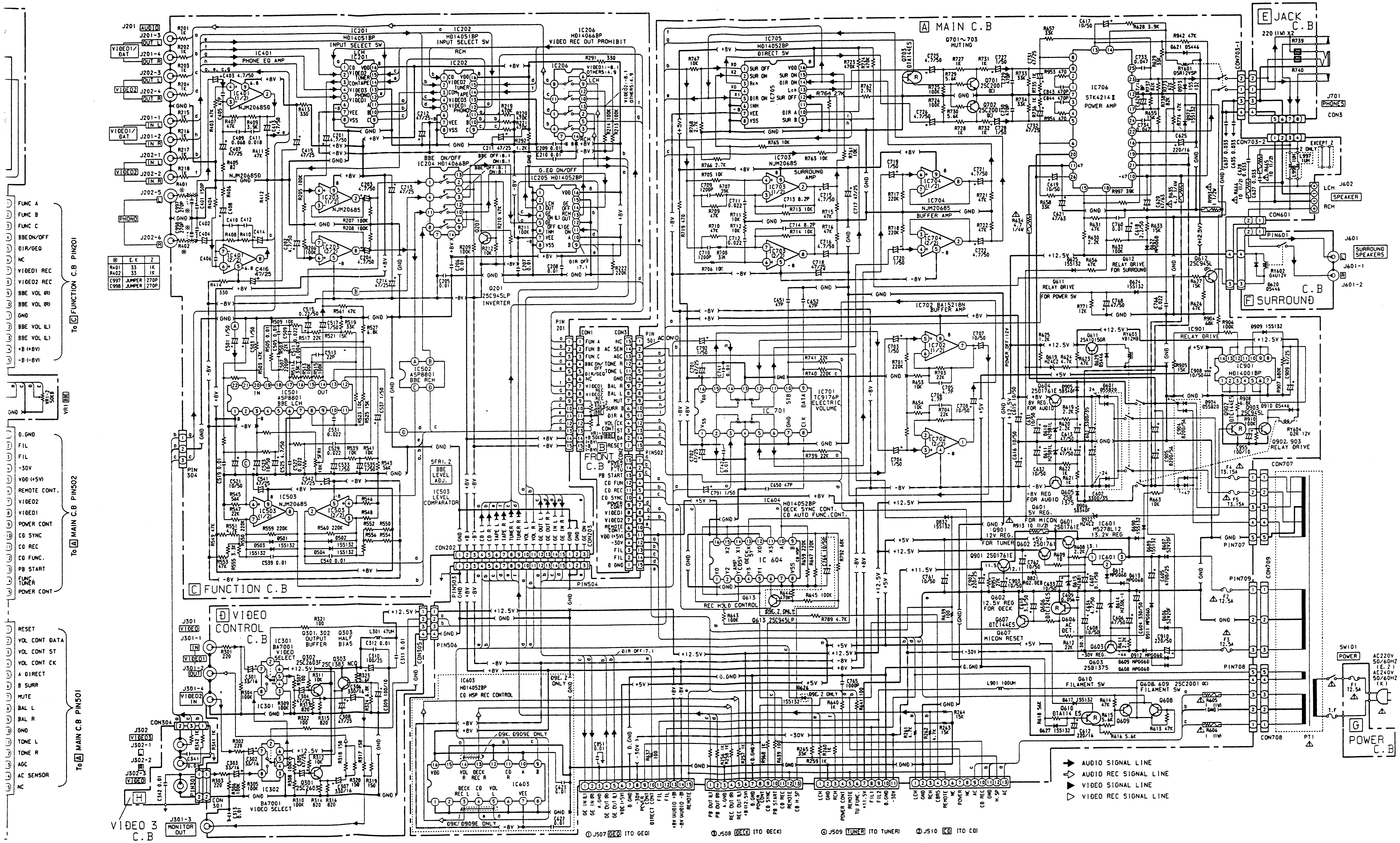
ANODE CONNECTION TABLE

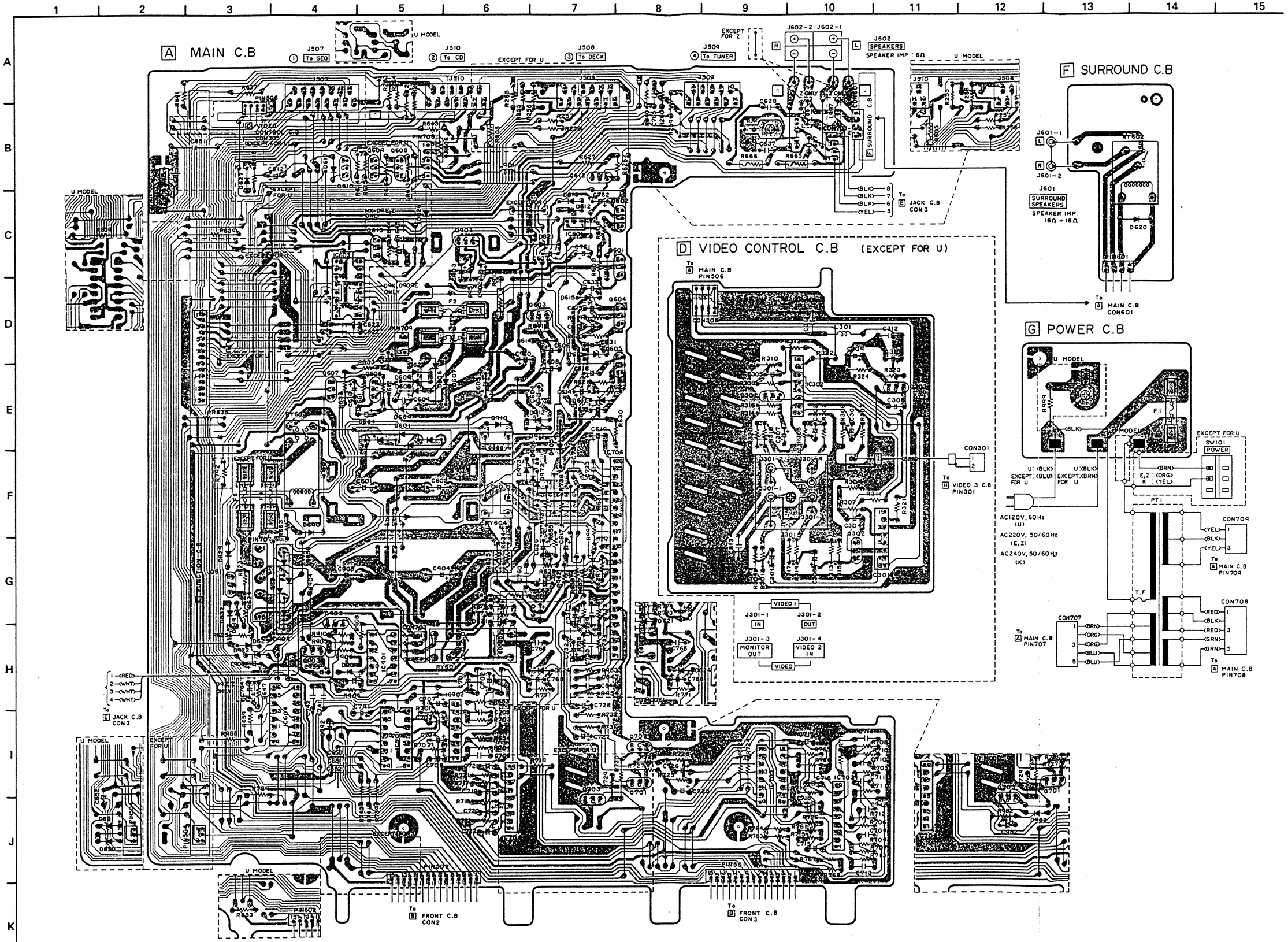
	9G	8G	7G	6G	5G	4G	3G	2G	1G
a	a	a	a	a	a	a	a	a	
b	b	b	b	b	b	b	b	b	
c	–	c	c	–	c	c	c	c	
d	d	d	d	d	d	d	d	d	
e	e	–	e	–	e	e	e	dB	
f	f	f	f	f	f	f	f	f	
g	g	g	g	g	g	–	g	–	
h	h	h	h	h	h	h	—	h	
i	–	–	(VIDEO1)	(VIDEO2)	–	(VIDEO3)	–	–	
s	MONITOR	–	VIDEO1	VIDEO2	–	VIDEO3	–	–	-AV SURROUND-

SCHEMATIC DIAGRAM—1 (MX—D9,D909,E,K,Z)

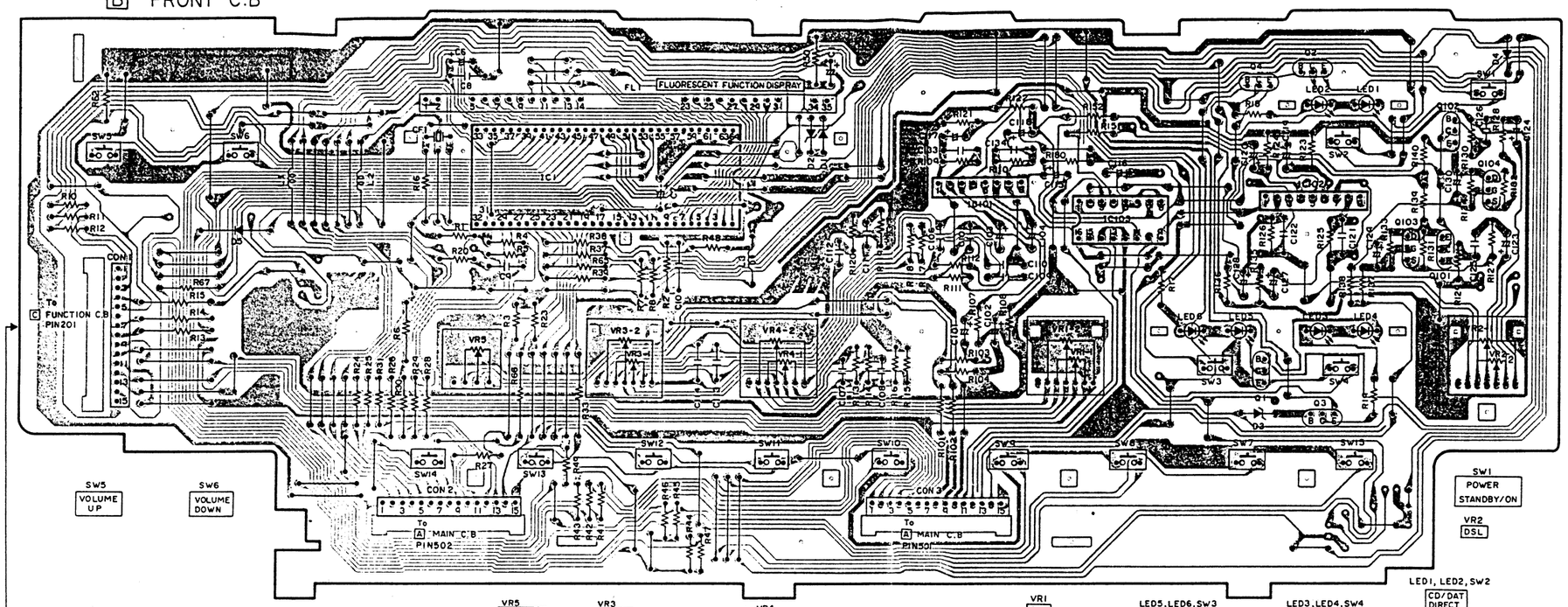




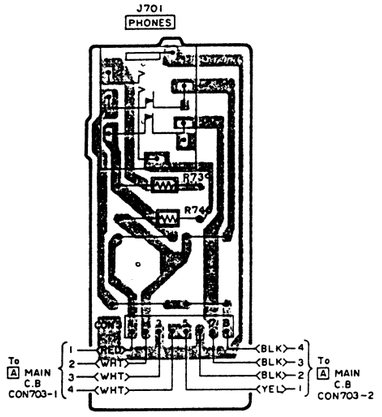

A MAIN C.B
B FRONT C.B
C FUNCTION C.B
D VIDEO CONTROL C.B
E JACK C.B
F SURROUND C.B
G POWER C.B
H VIDEO 3 C.B
IC201 HD14051BP INPUT SELECT SW
IC202 HD14051BP INPUT SELECT SW
IC206 HD14066BP VIDEO REC OUT PROHIBIT
IC401 PHONE EQ AMP
NJM2068SD
BBE ON/OFF IC204 HD14066BP
G.EQ ON/OFF IC205 HD14052BP
IC203 NJM2068S
Q201 2SC945LP INVERTER
IC501 ASP8801 BBE LCH
IC502 ASP8801 BBE RCH
IC503 NJM2068S
IC503 LEVEL COMPARATOR
SFR1, 2 BBE LEVEL ADJ.
IC705 HD14052BP DIRECT SW
IC703 NJM2068S SURROUND AMP
IC704 NJM2068S BUFFER AMP
IC702 BA15218N BUFFER AMP
IC701 TC9176P ELECTRIC VOLUME
Q701~703 MUTING
IC706 STK4214 II POWER AMP
IC604 HD14052BP DECK SYNC CONT. CD AUTO FUNC.CONT.
IC603 HD14052BP CD HSP REC CONTROL
IC301 BA7001 VIDEO SELECT
IC302 BA7001 VIDEO SELECT
Q301, 302 OUTPUT BUFFER
Q303 HALF BIAS
IC901 HD14001BP RELAY DRIVE
Q902, 903 RELAY DRIVE
Q611 RELAY DRIVE FOR POWER SW
Q612 RELAY DRIVE FOR SURROUND
Q604 2SD1761E 8V REG. FOR AUDIO
Q605 2SB1375 -8V REG FOR AUDIO
Q601 5V REG. FOR MICON
IC601 M5278L12 13.2V REG
Q901 12V REG. FOR TUNER
Q602 12.5V REG FOR DECK
Q607 DTC144ES MICON RESET
Q606 AC DET.
Q603 2SB1375 -30V REG.
Q610 FILAMENT SW
Q608, 609 2SC2001 (K) FILAMENT SW
J701 PHONES
J602 SPEAKER
J601 SURROUND SPEAKERS
SW101 POWER
AC220V 50/60HZ (E, Z)
AC240V 50/60HZ (K)
To C FUNCTION C.B PIN201
1 FUNC A
2 FUNC B
3 FUNC C
4 BBEON/OFF
5 DIR/GEQ
6 NC
7 VIDEO1 REC
8 VIDEO2 REC
9 BBE VOL (R)
10 BBE VOL (R)
11 GND
12 BBE VOL (L)
13 BBE VOL (L)
14 +B (+8V)
15 -B (-8V)
To A MAIN C.B PIN502
1 D.GND
2 FIL
3 FIL
4 -30V
5 VDD (+5V)
6 REMOTE CONT.
7 VIDEO2
8 VIDEO1
9 POWER CONT
10 CD SYNC
11 CD REC
12 CD FUNC.
13 PB START
14 FUNC TUNER
15 POWER CONT
To A MAIN C.B PIN501
1 RESET
2 VOL CONT DATA
3 VOL CONT ST
4 VOL CONT CK
5 A DIRECT
6 B SURR
7 MUTE
8 BAL L
9 BAL R
10 GND
11 TONE L
12 TONE R
13 AGC
14 AC SENSOR
15 NC
① J507 GEQ (TO GEQ)
③ J508 DECK (TO DECK)
④ J509 TUNER (TO TUNER)
② J510 CD (TO CD)
AUDIO SIGNAL LINE
AUDIO REC SIGNAL LINE
VIDEO SIGNAL LINE
VIDEO REC SIGNAL LINE


A MAIN C.B
U MODEL
EXCEPT FOR U
EXCEPT FOR Z
J507 To GEQ
J510 To CD
J508 To DECK
J509 To TUNER
J602-2 J602-1
J602 SPEAKERS
SPEAKER IMP : 6Ω
F SURROUND C.B
J601-1
J601-2
J601 SURROUND SPEAKERS
SPEAKER IMP : 16Ω + 16Ω
D620
To A MAIN C.B CON601
(BLK) 8
(BLK) 7
(BLK) 6
(YEL) 5
To E JACK C.B CON3
D VIDEO CONTROL C.B (EXCEPT FOR U)
To A MAIN C.B PIN506
CON301
To H VIDEO 3 C.B PIN301
VIDEO 1
J301-1 IN
J301-2 OUT
J301-3 MONITOR OUT
J301-4 VIDEO 2 IN
VIDEO
G POWER C.B
SW101 POWER
U : (BLK) EXCEPT FOR U : (BLU)
U : (BLK) EXCEPT FOR U : (BRN)
E,Z : (BRN) K : (ORG) (YEL)
AC120V, 60Hz (U)
AC220V, 50/60Hz (E,Z)
AC240V, 50/60Hz (K)
PT1
T.F
CON709
(YEL) 1
(BLK)
(YEL) 3
To A MAIN C.B PIN709
CON708
(RED) 1
(BLK)
(RED) 3
(GRN)
(GRN) 5
To A MAIN C.B PIN708
CON707
(BRN) 1
(ORG)
(ORG) 3
(BLU)
(BLU) 5
To A MAIN C.B PIN707
1 (RED)
2 (WHT)
3 (WHT)
4 (WHT)
To E JACK C.B CON3
To B FRONT C.B CON2
To B FRONT C.B CON3

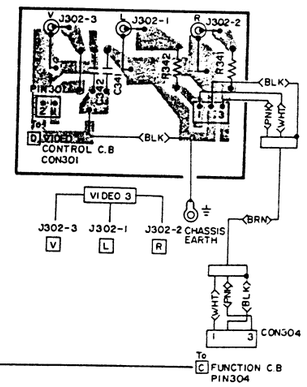
B FRONT C.B



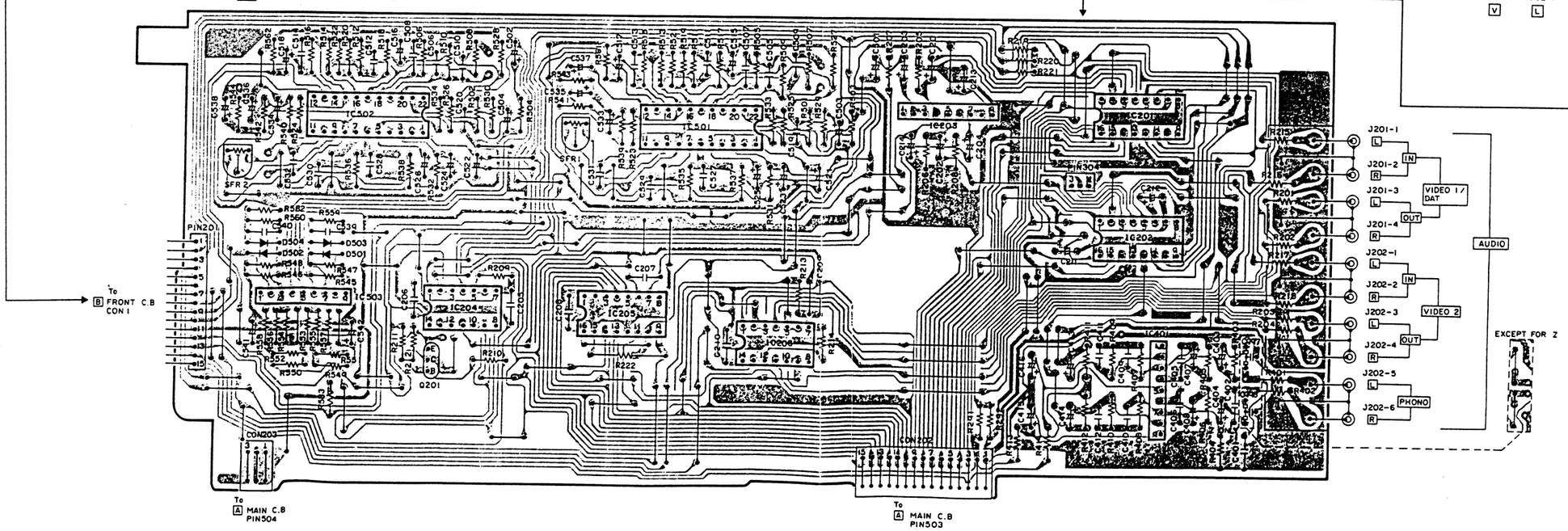
E JACK C.B



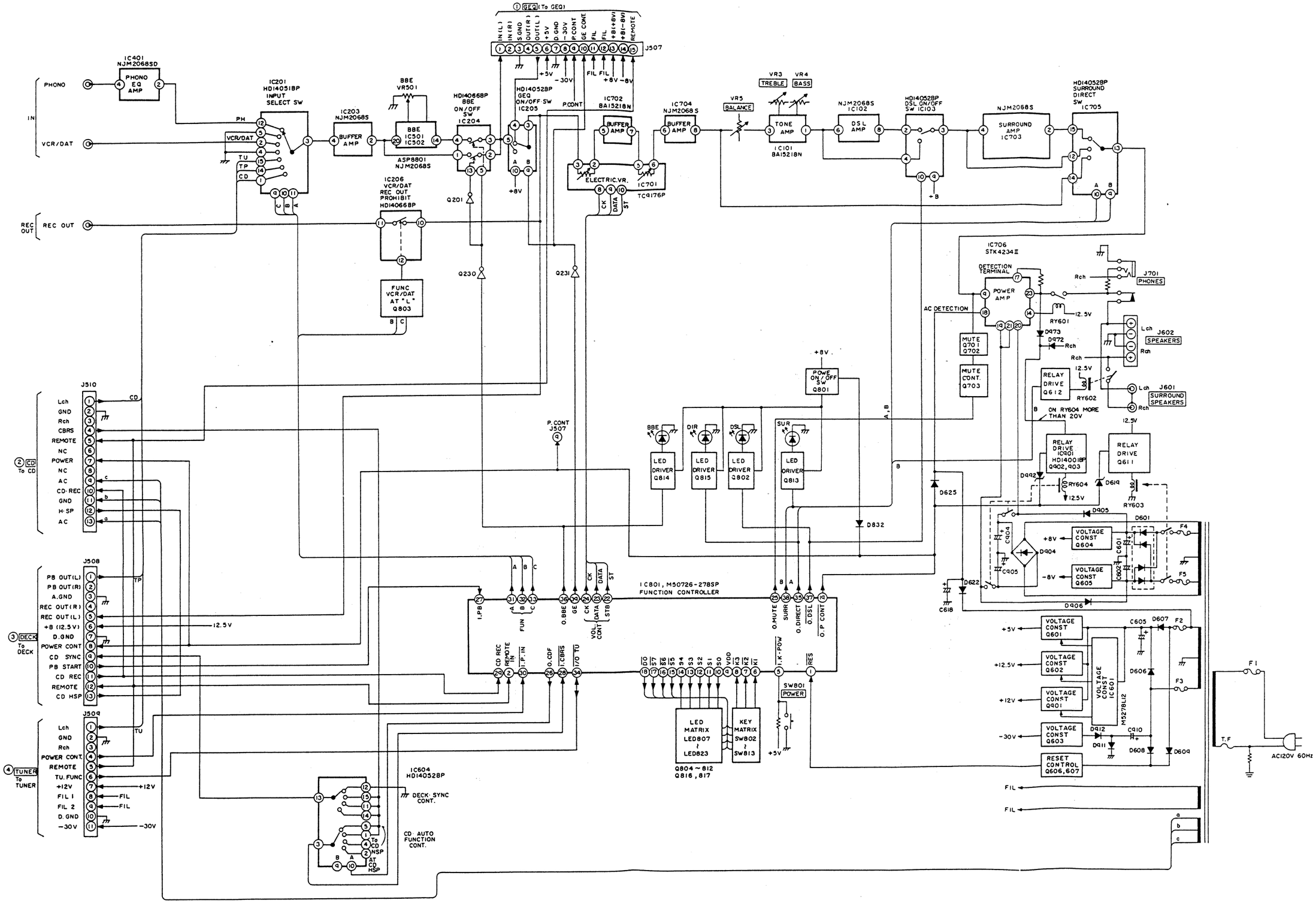
H VIDEO 3 C.B



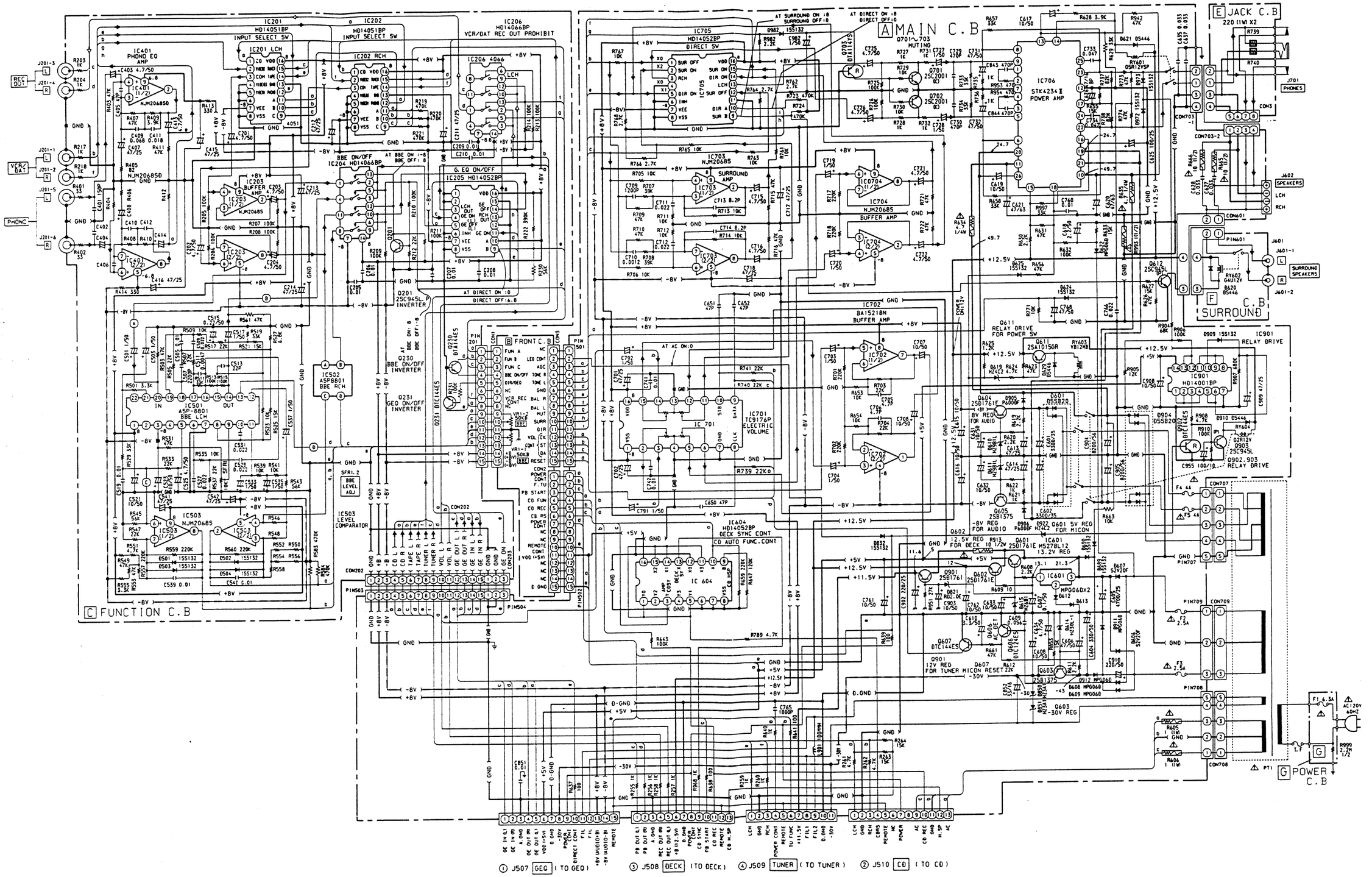
C FUNCTION C.B



BLOCK DIAGRAM – 1 (MX – D9, D909U)



SCHEMATIC DIAGRAM – 2 (MX – D9, D909U)



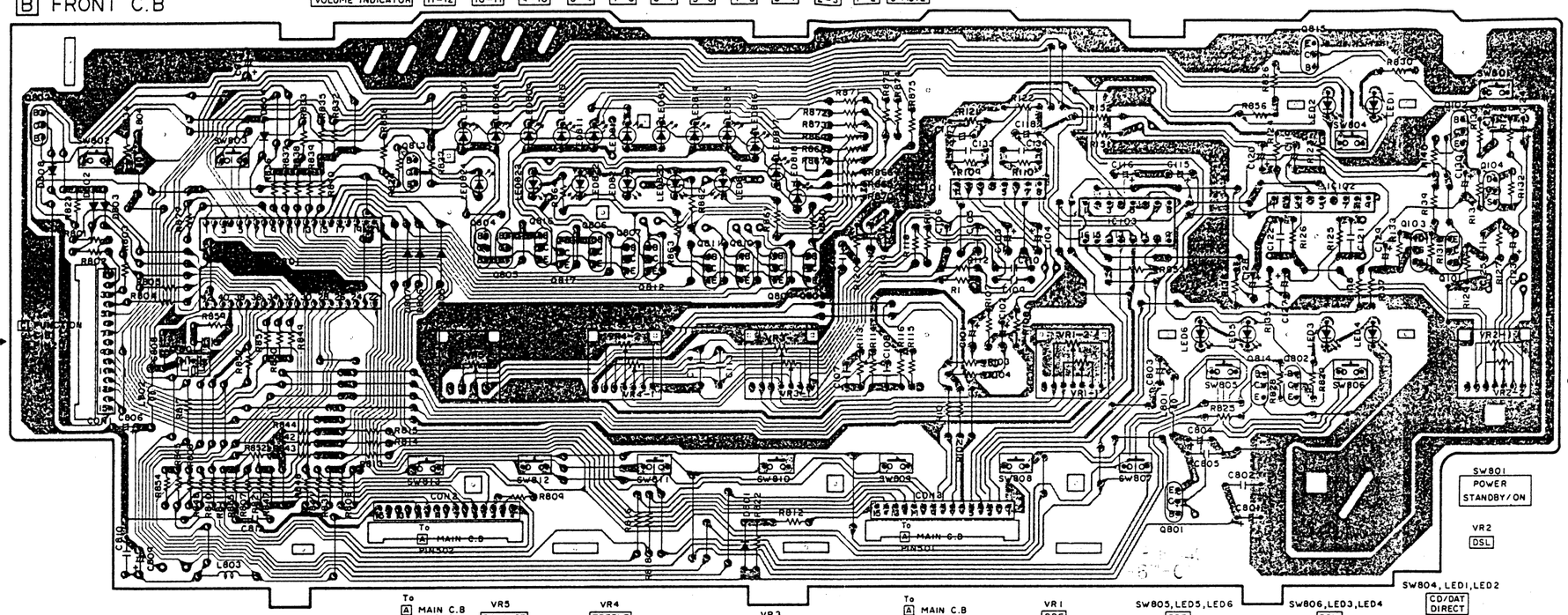
WIRING – 3 (MX – D9,D909U)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A B C D E F G H I J K

B FRONT C.B

VOLUME INDICATOR: LED807 11–12, LED808 10–11, LED809 9–10, LED810 8–9, LED811 7–8, LED812 6–7, LED813 5–6, LED814 4–5, LED815 3–4, LED816 2–3, LED817 1–2, LED818 0 MUTE



To A MAIN C.B PIN502 — VR5 BALANCE — VR4 TREBLE — VR3 BASS — To A MAIN C.B PIN501 — VR1 BBE

SW805, LED5, LED6: BBE OFF/ON

SW806, LED3, LED4: DSL OFF/ON

SW804, LED1, LED2: CD/DAT DIRECT OFF/ON

SW801 POWER STANDBY/ON

VR2 DSL

SW802 VOLUME UP

SW803 VOLUME DOWN

SW813 MUTE/WAKE UP

SW812, LED823 VCR/DAT

SW811, LED822 CD

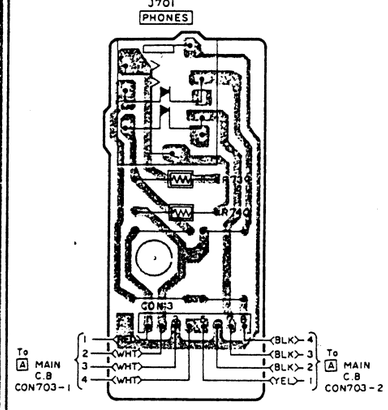
SW810, LED821 PHONO

SW809, LED820 TUNER

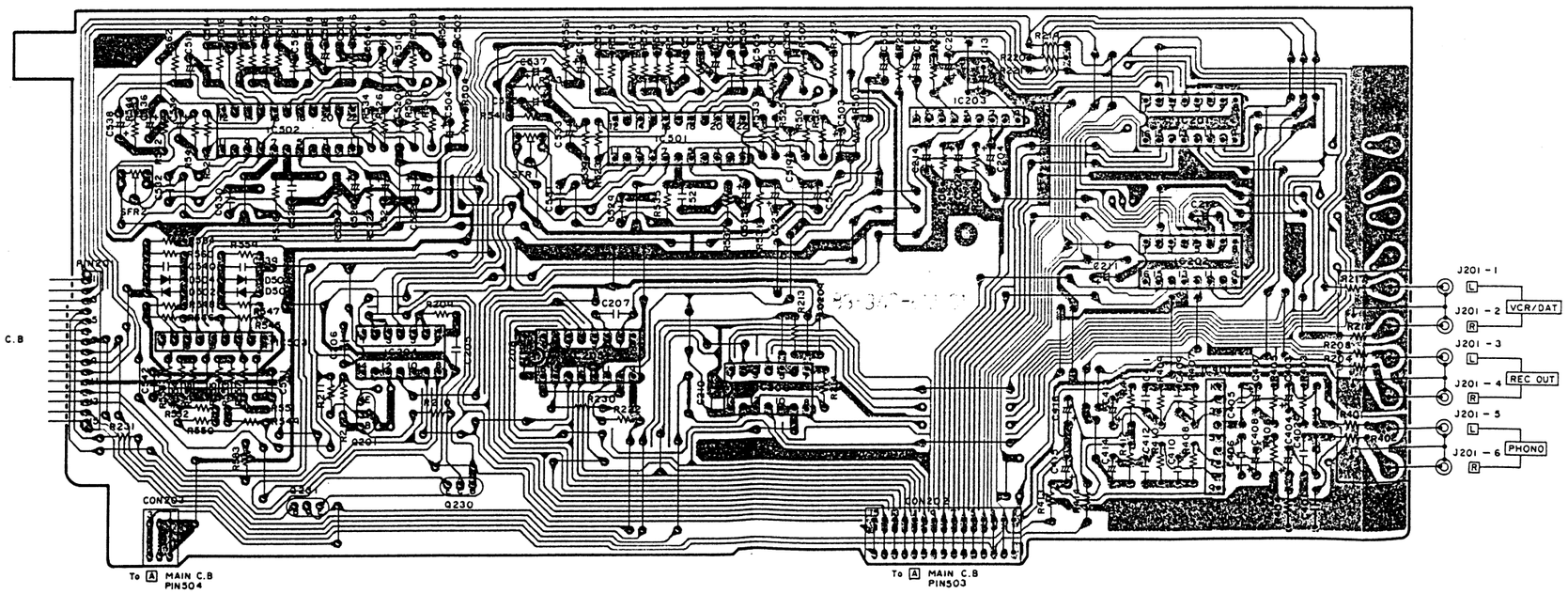
SW808, LED819 TAPE

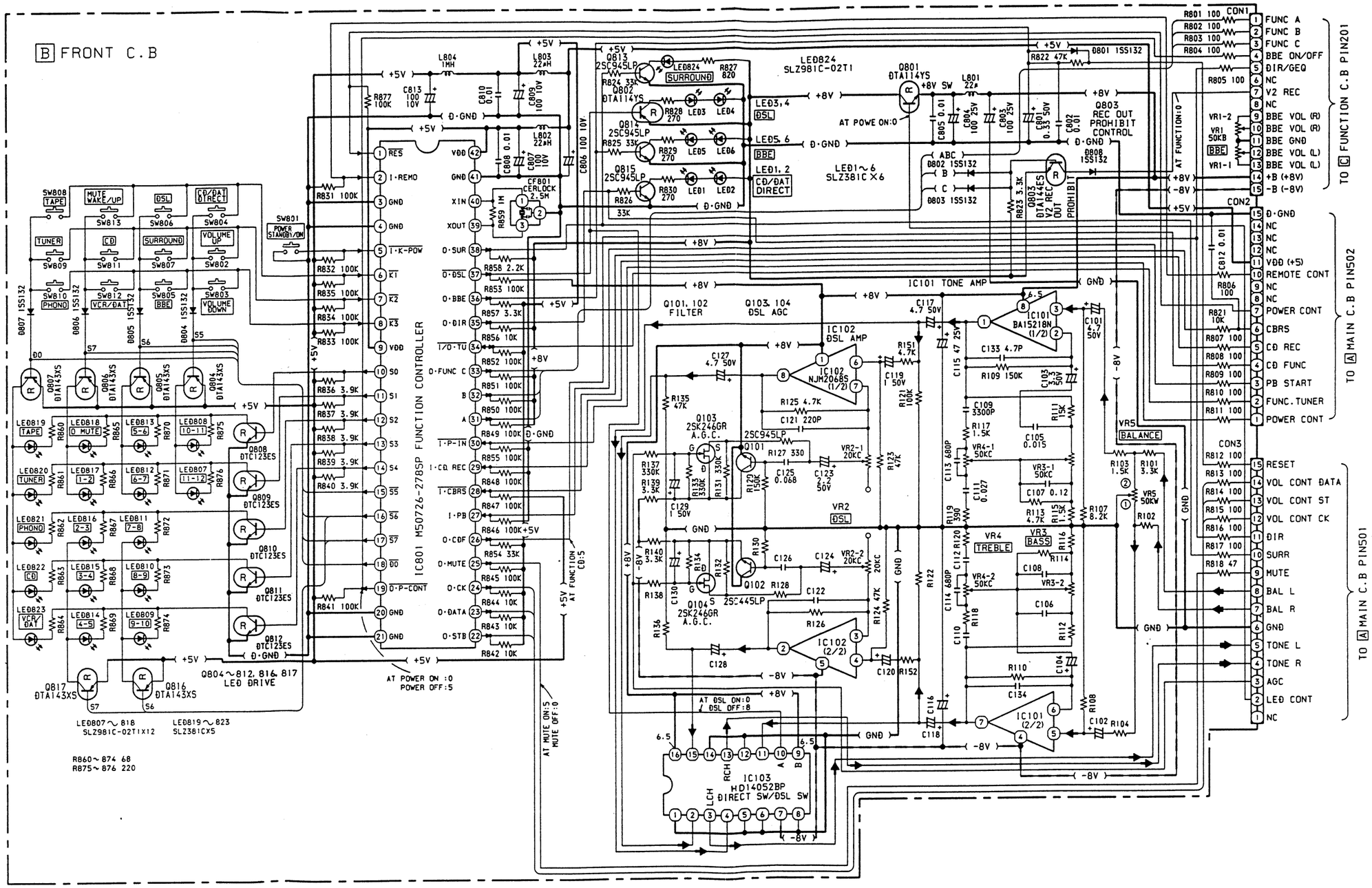
SW807, LED824 SURROUND

E JACK C.B

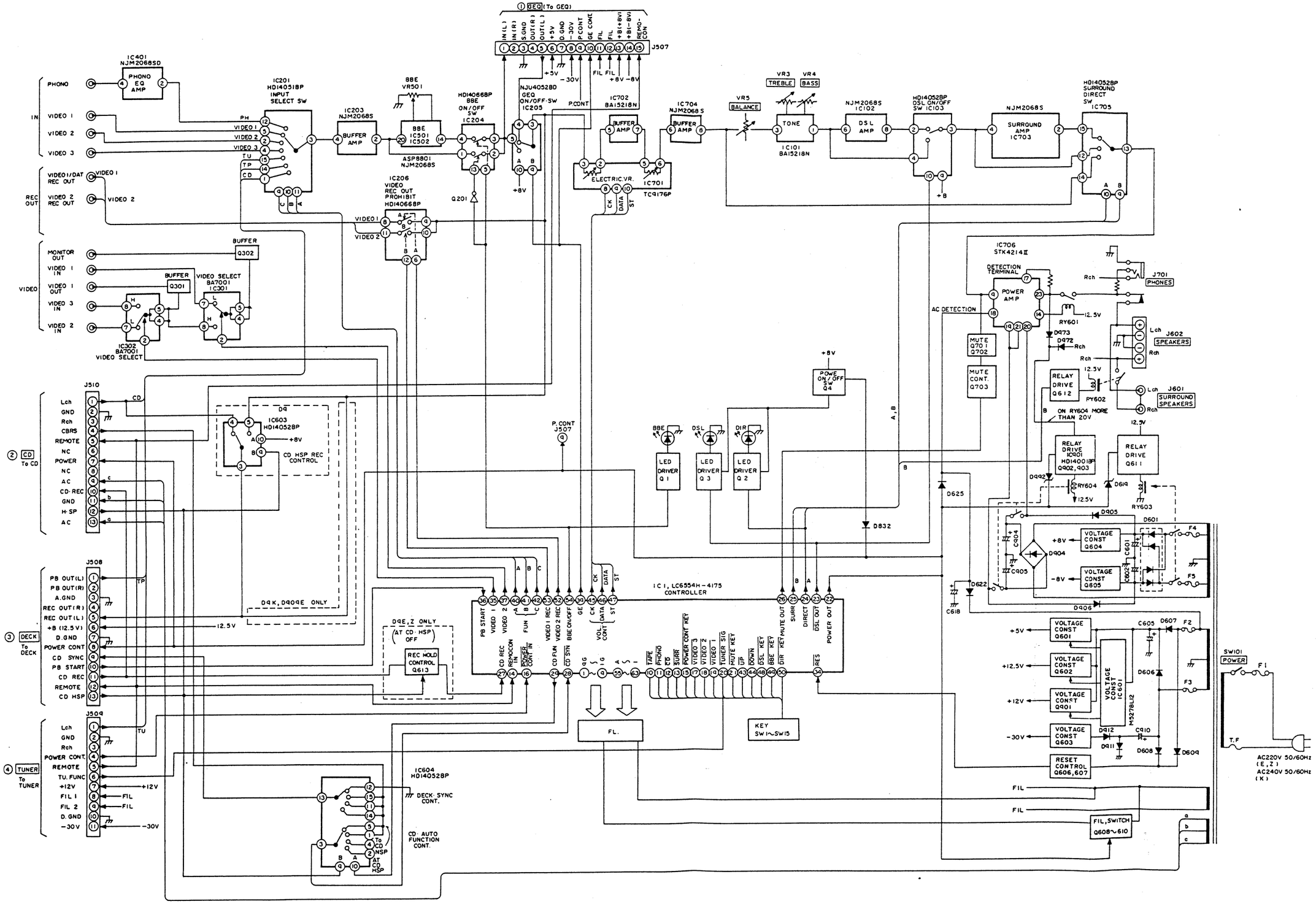


C FUNCTION C.B


To B FRONT C.B CON1
CON202
CON201
To A MAIN C.B PIN504
To A MAIN C.B PIN503
J201 - 1 L
J201 - 2 R VCR/DAT
J201 - 3 L
J201 - 4 R REC OUT
J201 - 5 L
J201 - 6 R PHONO

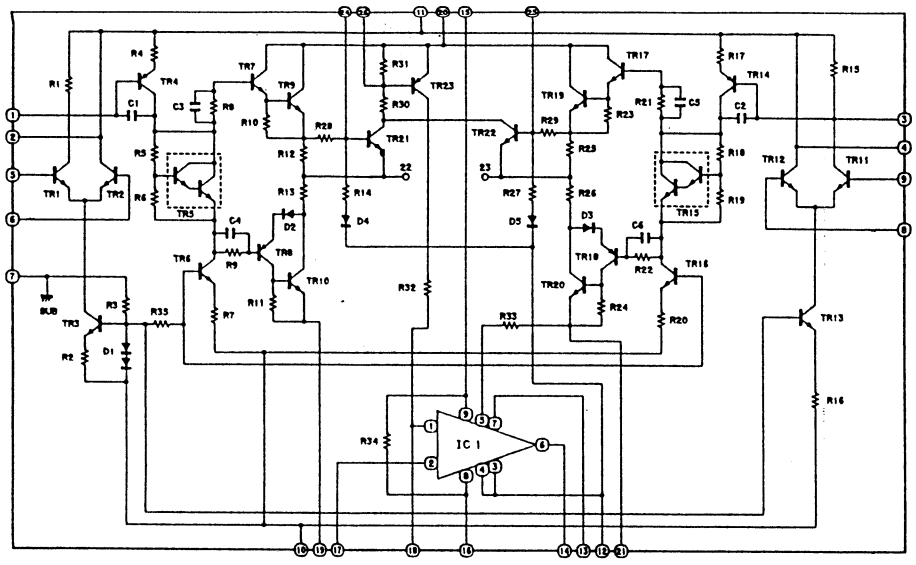

B FRONT C.B
IC801 M50726-2785P FUNCTION CONTROLLER
IC101 TONE AMP
IC102 DSL AMP
IC103 HD14052BP DIRECT SW/DSL SW
Q101, 102 FILTER
Q103, 104 DSL AGC
Q804~812, 816, 817 LED DRIVE
LED824 SLZ981C-02T1
LED1~6 SLZ381C×6
LED807~818 SLZ981C-02T1X12
LED819~823 SLZ381CX5
R860~874 68
R875~876 220
AT POWE ON:0
AT FUNCTION:0
AT POWER ON :0 POWER OFF:5
AT MUTE ON:5 MUTE OFF:0
AT DSL ON:0 DSL OFF:8
TO C FUNCTION C.B PIN201
TO A MAIN C.B PIN502
TO A MAIN C.B PIN501
FUNC A
FUNC B
FUNC C
BBE ON/OFF
DIR/GEQ
V2 REC
BBE VOL (R)
BBE GND
BBE VOL (L)
+B (+8V)
-B (-8V)
VDD (+5)
REMOTE CONT
CBRS
CD REC
CD FUNC
PB START
FUNC. TUNER
POWER CONT
RESET
VOL CONT DATA
VOL CONT ST
VOL CONT CK
DIR
SURR
MUTE
BAL L
BAL R
GND
TONE L
TONE R
AGC
LED CONT
NC
Q803 REC OUT PROHIBIT CONTROL
VR5 BALANCE
VR4 TREBLE
VR3 BASS
VR2 DSL

BLOCK DIAGRAM-2 (MX-D9,D909,E,K,Z)


① GEQ (To GEQ)
J507
IN(L) IN(R) S.GND OUT(R) OUT(L) +5V D.GND −30V P.CONT GE CONT FIL FIL +B(+8V) +B(−8V) REMO-CON
+5V −30V FIL FIL +8V −8V
IC401 NJM2068SD PHONO EQ AMP
PHONO
IN VIDEO 1 VIDEO 2 VIDEO 3
REC OUT VIDEO1/DAT REC OUT VIDEO 2 REC OUT
VIDEO MONITOR OUT VIDEO 1 IN VIDEO 1 OUT VIDEO 3 IN VIDEO 2 IN
IC201 HD14051BP INPUT SELECT SW
PH VIDEO 1 VIDEO 2 VIDEO 3 TU TP CD
IC203 NJM2068S BUFFER AMP
8BE VR501
8BE IC501 IC502
ASP8801 NJM2068S
HD14066BP 8BE ON/OFF SW IC204
Q201
NJU4052BD GEQ ON/OFF SW IC205
P.CONT
IC702 BA15218N
BUFFER AMP
ELECTRIC VR.
IC701 TC9176P
CK DATA ST
IC704 NJM2068S BUFFER AMP
VR5 BALANCE
VR3 TREBLE VR4 BASS
TONE
IC101 BA15218N
NJM2068S IC102 DSL AMP
HD14052BP DSL ON/OFF SW IC103
NJM2068S SURROUND AMP IC703
HD14052BP SURROUND DIRECT SW IC705
A B
+8
IC206 VIDEO REC OUT PROHIBIT HD14066BP
VIDEO 1
VIDEO 2
BUFFER Q302
BUFFER Q301
VIDEO SELECT BA7001 IC301
IC302 BA7001 VIDEO SELECT
IC706 STK4214II
DETECTION TERMINAL
POWER AMP
AC DETECTION
MUTE Q701 Q702
MUTE CONT. Q703
J701 PHONES
Rch
RY601 12.5V
D973 D972
J602 SPEAKERS
RELAY DRIVE Q612
RY602
J601 SURROUND SPEAKERS
B ON RY604 MORE THAN 20V
RELAY DRIVE IC901 HD14001BP Q902,903
RELAY DRIVE Q611
D492 RY604 D619 RY603
D905 D601
VOLTAGE CONST Q604 +8V
VOLTAGE CONST Q605 −8V
D904 C904 C905 C601 C602
D622 C618 D625 D832 D906
C605 D607 F2
VOLTAGE CONST Q601 +5V
VOLTAGE CONST Q602 +12.5V
VOLTAGE CONST Q401 +12V
VOLTAGE CONST Q603 −30V
VOLTAGE CONST (C401) M5278L12
D606 F3
D412 D411 C410 D608 D609
RESET CONTROL Q606,607
FIL
FIL, SWITCH Q608~610
SW101 POWER F1 T.F
AC220V 50/60Hz (E,Z) AC240V 50/60Hz (K)
② CD To CD
J510
Lch GND Rch CBRS REMOTE NC POWER NC AC CD-REC GND H-SP AC
CD
IC603 HD140528P
CD HSP REC CONTROL
D9K, D909E ONLY
D9E, Z ONLY (AT CD-HSP OFF)
REC HOLD CONTROL Q613
③ DECK To DECK
J508
PB OUT(L) PB OUT(R) A.GND REC OUT(R) REC OUT(L) +B (12.5V) D.GND POWER CONT CD SYNC PB START CD REC REMOTE CD HSP
TP
12.5V
④ TUNER To TUNER
J509
Lch GND Rch POWER CONT. REMOTE TU. FUNC +12V FIL 1 FIL 2 D.GND −30V
TU
+12V FIL FIL −30V
IC604 HD140528P
DECK SYNC CONT.
CD AUTO FUNCTION CONT.
To CD HSP
AT CD HSP
P.CONT J507
IC1, LC6554H-4175 CONTROLLER
PB START VIDEO 1 VIDEO 2 A B C FUN VIDEO 1 REC VIDEO 2 REC CD PLAY CD SYN BBE ON/OFF GE CK DATA ST
CD REC REMOCON IN POWER CONT IN CD PLAY CD SYN
TAPE PHONO CD SURR POWER CONT KEY VIDEO 3 VIDEO 2 VIDEO 1 TUNER STG MUTE KEY UP DOWN DSL KEY BBE KEY DIR KEY
MUTE OUT SURR DIRECT DSL OUT POWER OUT
RES
FL.
KEY SW1~SW15
POWE ON/OFF SW Q4
+8V
A,B
LED DRIVER Q1 BBE
LED DRIVER Q3 DSL
LED DRIVER Q2 DIR

IC BLOCK DIAGRAM – 2 (MX – D9,D909)

IC,STK4214 II,STK4234 II

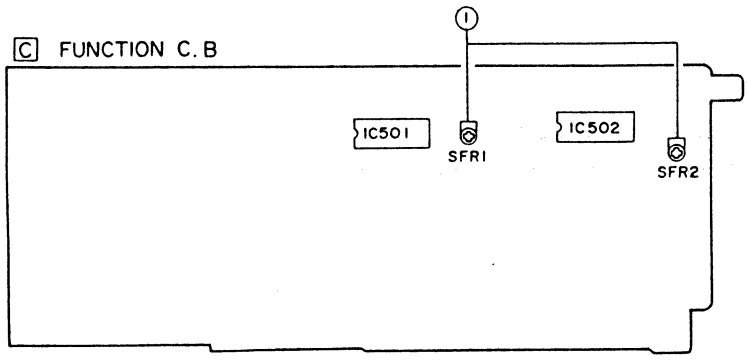


ADJUSTMENT (MX – D9,D909)

1. BBE Level Adjustment

Settings : · Test point : VIDEO 2 OUT
· Input terminal : VIDEO 1 / DAT IN
· Input signal : 0dBm (0.775V), 1kHz/5kHz
· BBE switch : ON
· BBE volume : MIN
· Adjustment location : SFR1 (Lch)
SFR2 (Rch)

Method : Set the BBE control to minimum and adjust so that the output difference between the 1kHz and 5kHz signals is 0±0.5dBm.



IC DESCRIPTION (MX – D9,D909)

IC,LC6554H – 4175 (MX – D9,D909 E,K,Z,)

Pin No.	Pin Name	I/O	Description	Active	Power off	Initialize	Power on
1~9	9G~1G	O	Grid outputs which light the FL display.	–	–	–	
10	$\overline{\text{TAPE}}$	I	TAPE key input.	L	–	–	–
11	$\overline{\text{PHONO}}$	I	PHONO key input.	L	–	–	–
12	$\overline{\text{CD}}$	I	CD key input.	L	–	–	–
13	$\overline{\text{SURR}}$	I	SURROUND key input.	L	–	–	–
14	REMOCON IN	I	REMOCON (remote control) signal input.	H	–	–	–
15	$\overline{\text{POWER}}$ $\overline{\text{CONT KEY}}$	I	POWER key input.	L	–	–	–
16	$\overline{\text{POWER}}$ $\overline{\text{CONT IN}}$	I	System power input. "L" input turns on the power to the system.	L	–	–	–
17	$\overline{\text{VIDEO 3}}$	I	VIDEO 3 key input.	L	–	–	–
18	$\overline{\text{VIDEO 2}}$	I	VIDEO 2 key input.	L	–	H	※
19	$\overline{\text{VIDEO 1}}$	I	VIDEO 1 key input.	L	–	H	※
20	$\overline{\text{TUNER}}$ $\overline{\text{SIG}}$	I/O	TUNER key input.	L	H	H	※
21	$\overline{\text{MUTE KEY}}$	I	MUTE key input.	L	–	H	–
22	POWER OUT	O	Power output. "H" output turn on the power to the whole system.	–	H	H	H
23	$\overline{\text{DSL OUT}}$	O	DSL output. "L" output turns DSL on.	–	H	H	※
24	DIRECT	O	DIRECT·ON/OFF·output terminal	–	L	H	※
25	SURR	O	SURROUND·ON/OFF·output terminal	–	L	H	※

	DIRECT ON	DIRECT OFF SURR ON	DIRECT OFF SURR OFF
24	H	L	L
25	L	H	L

The SURROUND switch is not turned on when the DIRECT switch is on.

Pin No.	Pin Name	I/O	Description	Active	Power off	Initialize	Power on
26	MUTE OUT	O	MUTE output. Outputs "H" in the following conditions. For 3.6 seconds after power is turned on, when the FUNCTION, DSL, BBE, SURR or DIRECT switch is changed over, and when VOL is set to ∞.	–	H	H	H
27	CD REC	I	CD REC signal input. "H" input sets the function to CD and disables switching of the function.	H	–	–	–
28	$\overline{\text{CD SYNC}}$	I	CD sync signal input. Sets the function to CD when "L"pulse is input.	L	–	–	–
29	CD FUN	O	CD function output. Outputs "H" when the function is set to CD.	–	L	L	※
30	TEST	I	Test pin connected to Vss.	–	–	–	–
31	Vss	–	GND.	–	–	–	–
32 33	OSC 1 OSC 2	–	These pins generate clock signals.	–	–	–	–

Pin No.	Pin Name	I/O	Description	Active	Power off	Initialize	Power on
34	$\overline{\text{RESET}}$	I	Reset pin. "L" input resets the IC.	L	L	L	H
35	VIDEO 1	O	Video control pins	–	※	H	※
37	VIDEO 2	O		–	※	L	※
36	PB START	I	"H" is applied from the DECK during tape play to set the function to TAPE.	H	L	L	L
38	18/$\overline{\text{20}}$ BIT	I	Selects the number of bits of electronic VR control data. Connected to GND, this selects 20 bits.	L	L	L	L
39	GE	O	Graphic equalizer on/off pin. Goes "L" in the DIRECT mode.	–	H	H	※
40	FUN A	O	Function control pins.	–	L	L	※
41	FUN B	O		–	L	L	※
42	FUN C	O		–	L	L	※
43	$\overline{\text{UP}}$	I	VR, UP key input.	L	H	H	H
44	$\overline{\text{DOWN}}$	I	VR, DOWN key input.	L	H	H	H
45	VOL CK	O	VR control clock output.	–	L	L	L
46	VOL DATA	O	VR control data output.	–	L	L	L
47	VOL ST	O	VR control strobe output.	–	L	L	L
48	$\overline{\text{DSL KEY}}$	I	DSL key input.	L	H	H	※
49	$\overline{\text{BBE KEY}}$	I	BBE key input.	L	H	H	※
50	$\overline{\text{DIR KEY}}$	I	DIRECT key input.	L	H	H	※
51	VP	–	Connected to -30V.	–	–	–	–
52	VIDEO 2 REC	O	VIDEO REC OUT control pins: Goes "L" when the function is set to VIDEO 1.	–	H	H	※
53	VIDEO 1 REC	O	VIDEO REC OUT control pins: Goes "L" when the function is set to VIDEO 2.	–	H	H	※
54	BBE ON/OFF	O	BBE on/off output. "H" output turns BBE on.	–	L	L	※
55~63	A~I	O	Segment outputs which light the FL display.	–	L	L	L
64	VDD	–	+ Power terminal.	–	–	–	–

	TAPE	TUNER	PHONO	CD	VIDEO 1	VIDEO 2	VIDEO 3
40	H	L	H	L	H	L	H
41	L	H	H	L	L	H	H
42	L	L	L	H	H	H	H

The levels with asterisk(※) are determined by the setting position of the function switch when power is turned off.

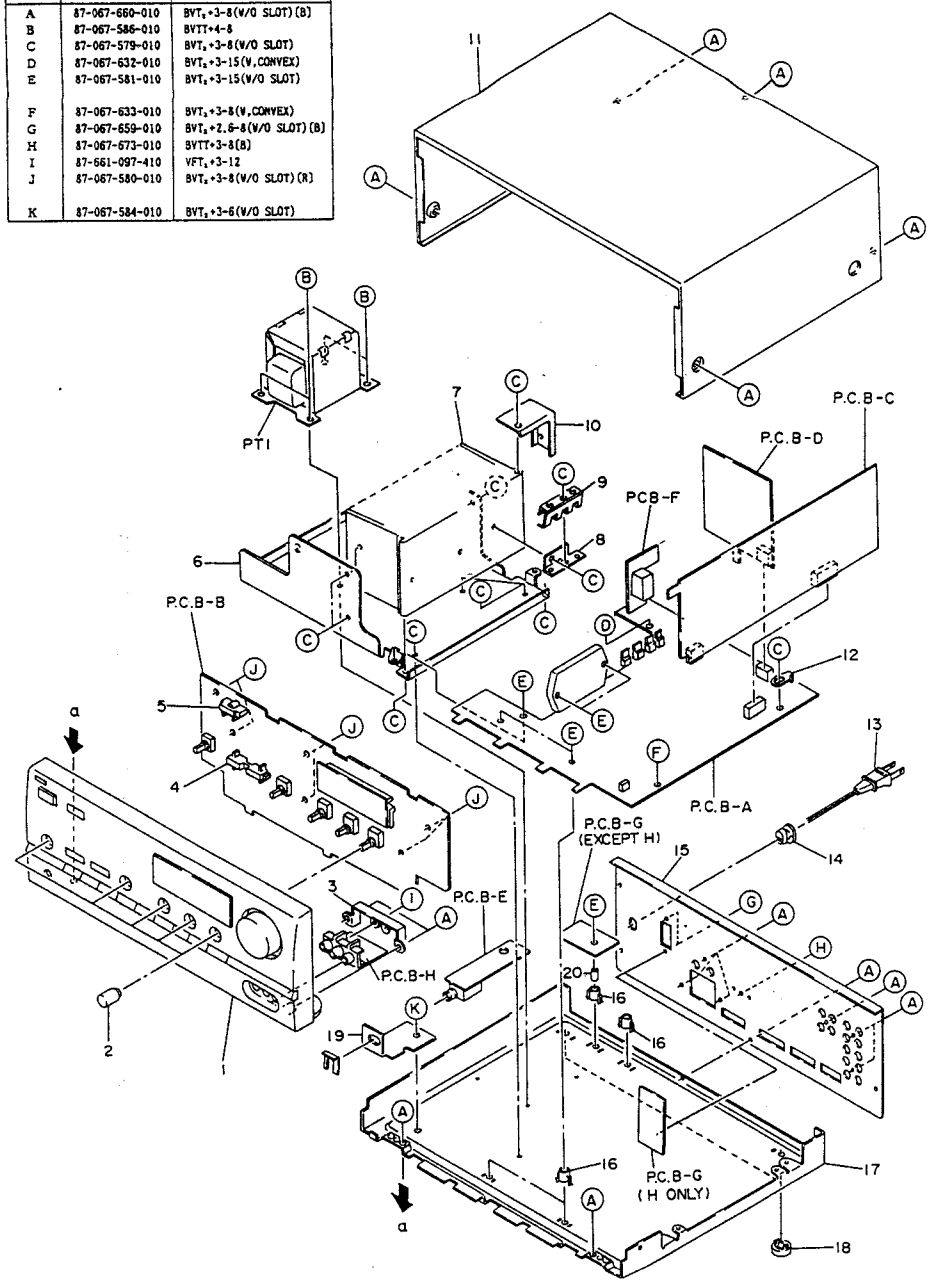
IC, M50726 – 2785P (MX – D9,D909U)

Pin No.	Pin Name	I/O	Description	Active	Power off	Initialize	Power on
1	$\overline{RES}$	I	Reset pin. "L" input resets the IC.	L	L	L	H
2	I·REMO	I	Remote control signal input.	H	–	–	–
3, 4	GND	–	Ground.	–	–	–	–
5	$\overline{I \cdot K-POW}$	I	POWER key input for the unassembled amplifier.	L	H	H	H
6~8	$\overline{K1 \sim K3}$	I	KEY SCAN inputs. Pin No. / KEY SCAN inputs: $\overline{D0}$ is "L" / $\overline{S7}$ is "L" / $\overline{S6}$ is "L" / $\overline{S5}$ is "L" 6 ($\overline{K1}$): K-TAPE / K-MUTE / K-DSL / K-DIR 7 ($\overline{K2}$): K-TUNER / K-CD / K-SUR / K-UP 8 ($\overline{K3}$): K-PHONO / K-AUX / K-BBE / K-DOWN	L	–	–	–
9	V_{DD}	–	+5V power pin.	–	–	–	–
10~14	S0~S4	O	LED DISPLAY SCAN outputs. Pin No. / LED DISPLAY SCAN outputs: $\overline{D0}$ is "L" / $\overline{S7}$ is "L" / $\overline{S6}$ is "L" / $\overline{S5}$ is "L" 10: S0 is "H" – D-TAPE / D- -∞ / D- -32 / D- - 4 11: S1 is "H" – D-TUNER / D- -76 / D- -26 / D- - 0 12: S2 is "H" – D-PHONO / D- -64 / D- -20 13: S3 is "H" – D-CD / D- -52 / D- -14 14: S4 is "H" – D-AUX / D- -42 / D- - 8	H	L	–	–
15~18	$\overline{S5 \sim D0}$	O	LED DISPLAY SCAN outputs. KEY SCAN outputs.	L	H	–	–
19	$\overline{O \cdot P-CONT}$	O	Outputs "L" when the power is turned on.	L	H	L	L
20, 21	GND	–	Ground.	–	–	–	–
22	O·STB	O	VR control strobe output.	–	L	L	L
23	O·DATA	O	VR control data output.	–	L	L	L
24	O·CK	O	VR control clock output.	–	L	L	L
25	O·MUTE	O	MUTE output. Outputs "H" in the following conditions. After power ON When FUNCTION, DSL, BBE, SUR, DIRECT switched When VR is SET to -∞ During MUTE ON	H	H	H	H
26	O·CDF	O	Outputs "H" when FUNCTION is set to CD.	H	L	L	※
27	I·PB	I	Receives "H" from DECK during TAPE PLAY to set FUNCTION to TAPE.	H	L	L	L
28	$\overline{I \cdot CBRS}$	I	Receives "L" from CD player during CD PLAY to set FUNCTION to CD.	L	–	–	–

Pin No.	Pin Name	I/O	Description	Active	POWER OFF	INITIALIZE	POWER ON
29	I·CD REC	I	CD REC signal input. "H" input sets FUNCTION to CD. During "H" input, FUNCTION cannot be switched to those other than CD.	H	–	–	–
30	$\overline{I \cdot P-IN}$	I	System power input. "L" input turns power on.	L	–	–	–
31 32 33	O·FUNC A O·FUNC B O·FUNC C	O O O	FUNCTION CONTROL pins TAPE / TUNER / PHONO / CD / AUX / MUTE A: H / L / H / L / L / L B: L / H / H / L / H / L C: L / L / L / H / H / L	– – –	L L L	L H L	※ ※ ※
34	$\overline{I/O\ TU}$	I/O	Receive "L" from the tuner when the BAND key or TUNING UP/DOWN key is operated to sets FUNCTION to TUNER. Outputs "L" when FUNCTION is set to TUNER.	L	H	L	※
35	O·DIR	O	Outputs "H" during DIRECT ON.	H	L	L	※
36	O·BBE	O	Outputs "H" during BBE ON.	H	L	L	※
37	$\overline{O \cdot DSL}$	O	Outputs "L" during DSL ON.	L	H	H	※
38	O·SUR	O	Outputs "H" during SURROUND ON.	H	L	L	※
39	X OUT	–	Clock oscillation pins.	–	–	–	–
40	X IN	–		–	–	–	–
41	GND	–	Ground.	–	–	–	–
42	V_{DD}	–	+5V power supply pin.	–	–	–	–

EXPLODED VIEW – 1 (MX – D9,D909,U,E,K,Z)

REF.NO.	PART NO.	DESCRIPTION
A	87-067-660-010	BVT$_2$+3-8(W/O SLOT)(B)
B	87-067-586-010	BVTT+4-8
C	87-067-579-010	BVT$_2$+3-8(W/O SLOT)
D	87-067-632-010	BVT$_2$+3-15(W,CONVEX)
E	87-067-581-010	BVT$_2$+3-15(W/O SLOT)
F	87-067-633-010	BVT$_2$+3-8(W,CONVEX)
G	87-067-659-010	BVT$_2$+2.6-8(W/O SLOT)(B)
H	87-067-673-010	BVTT+3-8(B)
I	87-661-097-410	VFT$_2$+3-12
J	87-067-580-010	BVT$_2$+3-8(W/O SLOT)(R)
K	87-067-584-010	BVT$_2$+3-6(W/O SLOT)



MECHANICAL PARTS LIST (MX – D9,D909U,E,K,Z)

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-1	*09-047-459-010	CABINET FRONT ASSY(D9H)	*	1
	1-1	*09-047-488-010	CABINET FRONT ASSY(D9U)	*	1
	1-1	*09-047-485-010	CABINET FRONT ASSY(D9E,K,Z)	*	1
	1-1	*09-047-486-010	CABINET FRONT ASSY(D909H)	*	1
	1-1	*09-047-487-010	CABINET FRONT ASSY(D909U)	*	1
	1-1	*09-047-528-010	CABINET FRONT ASSY(D909E)	*	1
	1-2	*81-689-002-019	KNOB,BALANCE	*	5
	1-3	*81-689-211-019	HOLDER,PIN JACK(EXCEPT D9U,D909U)	*	1
	1-4	*81-689-209-110	GUIDE,LED B	*	1
	1-5	*81-689-201-110	GUIDE,LED D	*	1
	1-6	*81-689-203-019	HOLDER,T	*	1
	1-7	---	HEAT SINK		1
	1-8	*81-669-217-010	HOLDER,L		1
	1-9	*81-669-210-010	HOLDER,TRANSISTOR		1
	1-10	*81-689-217-019	HOLDER,H-S	*	1
	1-11	*81-689-012-110	CABINET,STEEL	*	1
	1-12	*81-689-212-010	PLATE,EARTH	*	1
	1-13	*87-034-590-019	AC CORD(D9H,D909H)		1
	1-13	*87-034-589-019	AC CORD(D9U,D909U)		1
	1-13	*82-187-797-019	AC CORD(D9E,Z,D909E)		1
	1-13	*82-187-796-019	AC CORD(D9K)		1
	1-14	*87-085-184-010	BUSHING AC CORD(D9H,D909H)		1
	1-14	*87-085-189-010	BUSHING AC CORD(D9U,D909U)		1
	1-14	*87-085-185-010	BUSHING AC CORD(D9E,K,Z,D909E)		1
	1-15	*81-689-025-110	PANEL,REAR(D9H)	*	1
	1-15	*81-689-042-110	PANEL,REAR(D9HJ)	*	1
	1-15	*81-689-026-010	PANEL,REAR(D9U)	*	1
	1-15	*81-689-027-010	PANEL,REAR(D9E)	*	1
	1-15	*81-689-028-010	PANEL,REAR(D9K)	*	1
	1-15	*81-689-029-010	PANEL,REAR(D9Z)	*	1
	1-15	*81-689-048-010	PANEL,REAR(D909H)	*	1
	1-15	*81-689-049-010	PANEL,REAR(D909HJ)	*	1
	1-15	*81-689-053-010	PANEL,REAR(D909U)	*	1
	1-15	*81-689-057-010	PANEL,REAR(D909E)	*	1
	1-16	*81-664-202-010	HOLDER,PCB(H)		3
	1-16	*81-664-202-010	HOLDER,PCB(EXCEPT H)		4
	1-17	---	CHASSIS,AMP		1
	1-18	*81-669-025-010	FOOT,H11		2
	1-19	*81-689-204-019	HOLDER,PHONES	*	1
	1-20	*81-670-214-010	HOLDER,P.C.B D(EXCEPT H)		1

MODEL NO.

FX – W9,W909,W808

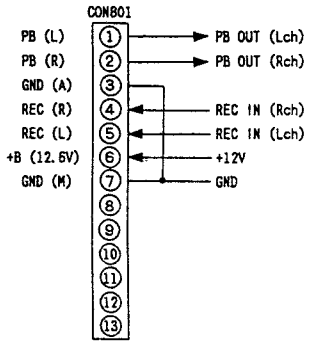
CAUTIONS WHEN SERVICING (FX – W9,W909,W808)

Model FX-W9/W909/W808/W8 does not have a power supply circuit. Power is supplied to it through a 13-pin flat cable and the signal inputs/outputs are also performed through this cable.
When servicing the FX-W9/W909/W808/W8, connect it to the MX-D9/D909 so power is supplied to the FX-W9/W909/W808/W8. If the MX-D9/D909 is not available, follow the procedure below.

As to the service information of FX-W8.
See the individual service manual of MX-D8, FX-W8.

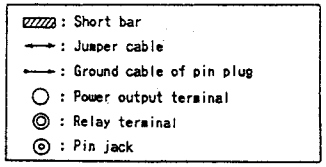
[When servicing the unassembled FX-W9/W909/W808/W8]

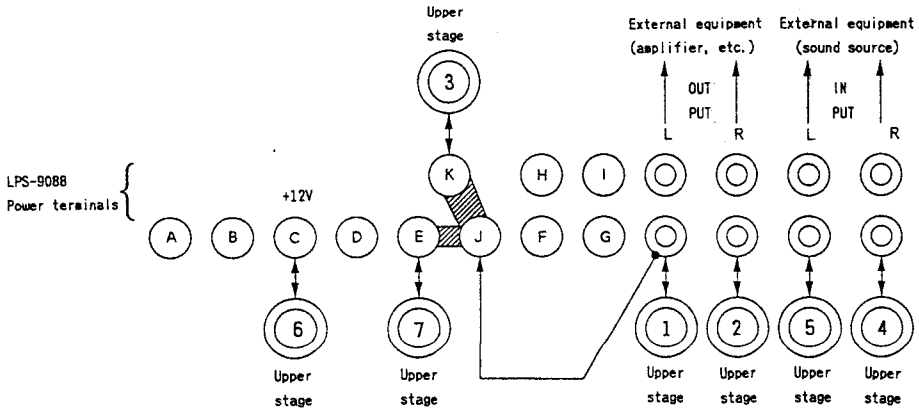
① Supply the following voltages to each terminal from an external power supply.



② Connection diagram when using multi power supply (LPS-9088)

- Connect a multi-conversion harness for the B connector to J1.





DISASSEEMBLY INSTRUCTIONS (FX – W9,W909,W808)

Azimuth Adjustment

1) Remove box plate (1) and box plate (2) to perform the azimuth adjustment.
2) Slide the box plates (1) and (2) in the directions of the arrows to release the hooks. (See Figure 1)

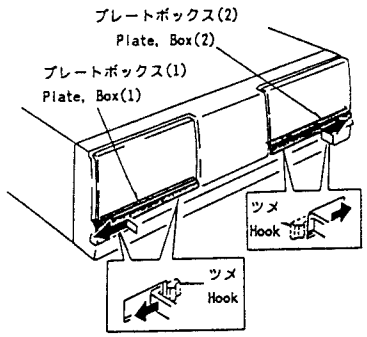


Fig-1

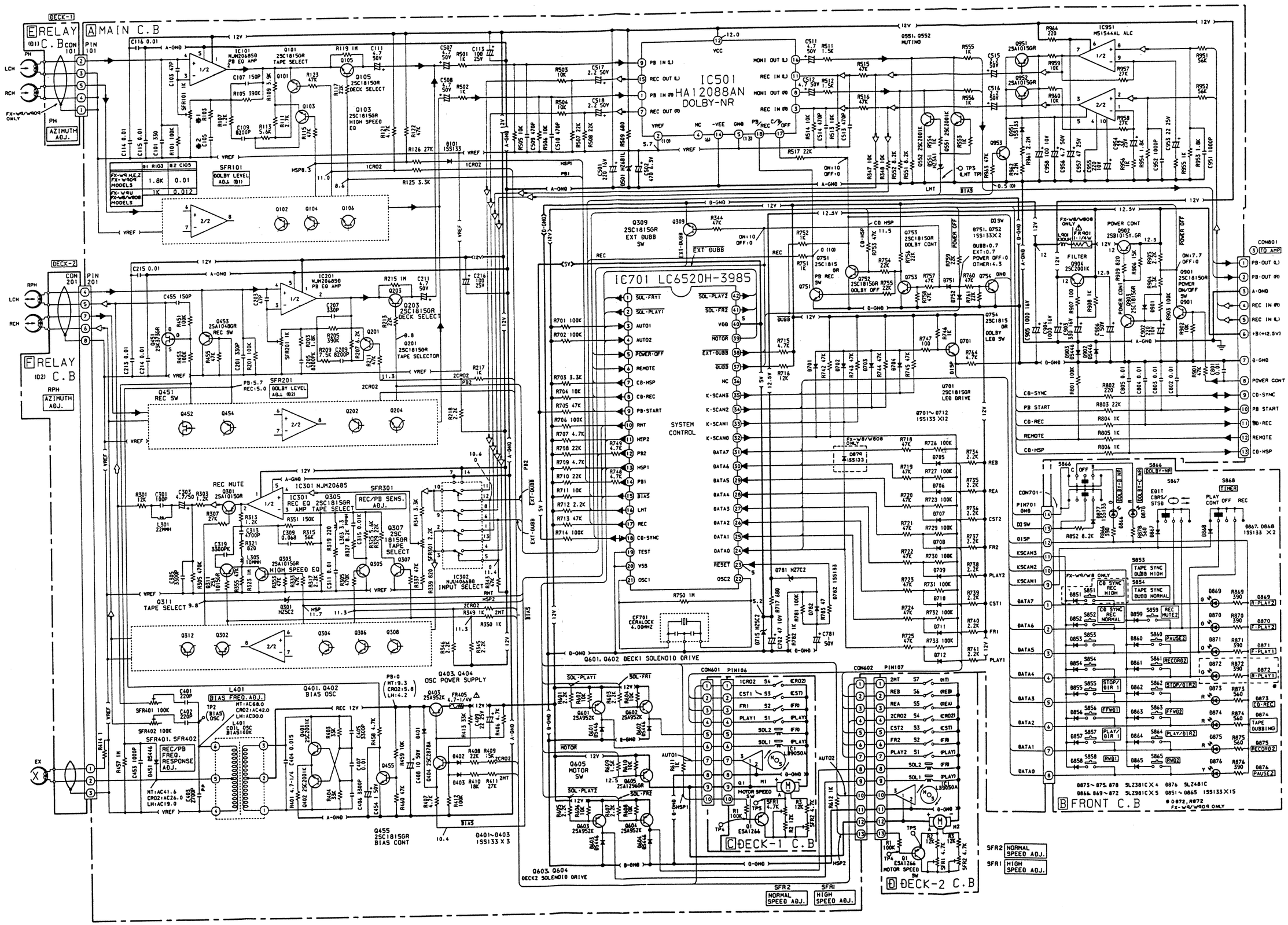
ELECTRICAL MAIN PARTS LIST (FX – W9,W909,W808)

REF.NO.	PART NO.	DESCRIPTION
=== IC ===		
	87-030-129-010	IC,HA12088AN
	S6-804-060-020	IC,LB9050A
	81-693-607-010	IC,LC6520H-3985
	87-027-952-019	IC,M51544AL
	87-020-680-019	IC,NJM2068S
	87-020-758-019	IC,NJM2068SD
	87-020-908-019	IC,NJU4066BD
=== TRANSISTOR ===		
	89-503-735-019	FET,2SK373GR
	89-109-521-019	TRANSISTOR,2SA952K
	89-110-155-019	TRANSISTOR,2SA1015(GR)
	89-110-485-019	TRANSISTOR,2SA1048GR
	89-112-965-019	TRANSISTOR,2SA1296GR
	89-210-154-019	TRANSISTOR,2SB1015Y,GR
	89-318-155-019	TRANSISTOR,2SC1815(GR)
	89-320-011-019	TRANSISTOR,2SC2001K
	89-328-785-019	TRANSISTOR,2SC2878(A)
	S6-804-050-040	TRANSISTOR,ESA1266
=== DIODE ===		
	87-020-465-019	DIODE,1SS133
	87-020-123-019	DIODE,0S446
	87-027-301-019	DIODE,ZENER HZ-3A1
	87-027-332-019	DIODE,ZENER HZ-6B1L
	87-027-555-019	DIODE,ZENER HZ5C2
	87-027-320-019	DIODE,ZENER HZ7C2
=== MAIN CIRCUIT BOARD SECTION ===		
C101	*87-018-125-019	CAP,CERA-SOL SS 330P
C102	*87-018-125-019	CAP,CERA-SOL SS 330P
C103	*87-018-115-019	CAP,CERA-SOL SS 47P
C104	*87-018-115-019	CAP,CERA-SOL SS 47P
C107	*87-018-121-019	CAP,CERA-SOL SS 150P
C108	*87-018-121-019	CAP,CERA-SOL SS 150P
C111	*87-010-404-019	CAP,ELECT 4.7-50 SME
C112	*87-010-404-019	CAP,ELECT 4.7-50 SME
C113	*87-010-384-019	CAP,ELECT 100-25
C114	*87-018-134-019	CAP,CERA-SOL SS 0.01
C115	*87-018-134-019	CAP,CERA-SOL SS 0.01
C116	*87-018-134-019	CAP,CERA-SOL SS 0.01
C201	*87-018-125-019	CAP,CERA-SOL SS 330P
C202	*87-018-125-019	CAP,CERA-SOL SS 330P
C203	*87-018-115-019	CAP,CERA-SOL SS 47P
C204	*87-018-115-019	CAP,CERA-SOL SS 47P
C207	*87-018-125-019	CAP,CERA-SOL SS 330P
C208	*87-018-125-019	CAP,CERA-SOL SS 330P
C211	*87-010-404-019	CAP,ELECT 4.7-50 SME
C212	*87-010-404-019	CAP,ELECT 4.7-50 SME
C213	*87-018-134-019	CAP,CERA-SOL SS 0.01
C214	*87-018-134-019	CAP,CERA-SOL SS 0.01
C215	*87-018-134-019	CAP,CERA-SOL SS 0.01
C216	*87-010-384-019	CAP,ELECT 100-25
C301	*87-018-119-019	CAP,CERA-SOL SS 100P
C302	*87-018-119-019	CAP,CERA-SOL SS 100P
C303	*87-010-404-019	CAP,ELECT 4.7-50 SME
C304	*87-010-404-019	CAP,ELECT 4.7-50 SME
C305	*87-018-199-019	CAP,CERA-SOL SS 3300P
C306	*87-018-199-019	CAP,CERA-SOL SS 3300P
C401	*87-018-123-019	CAP,CERA-SOL SS 220P
C402	*87-018-123-019	CAP,CERA-SOL SS 220P
C403	*87-014-067-019	CAP,PP 2700P

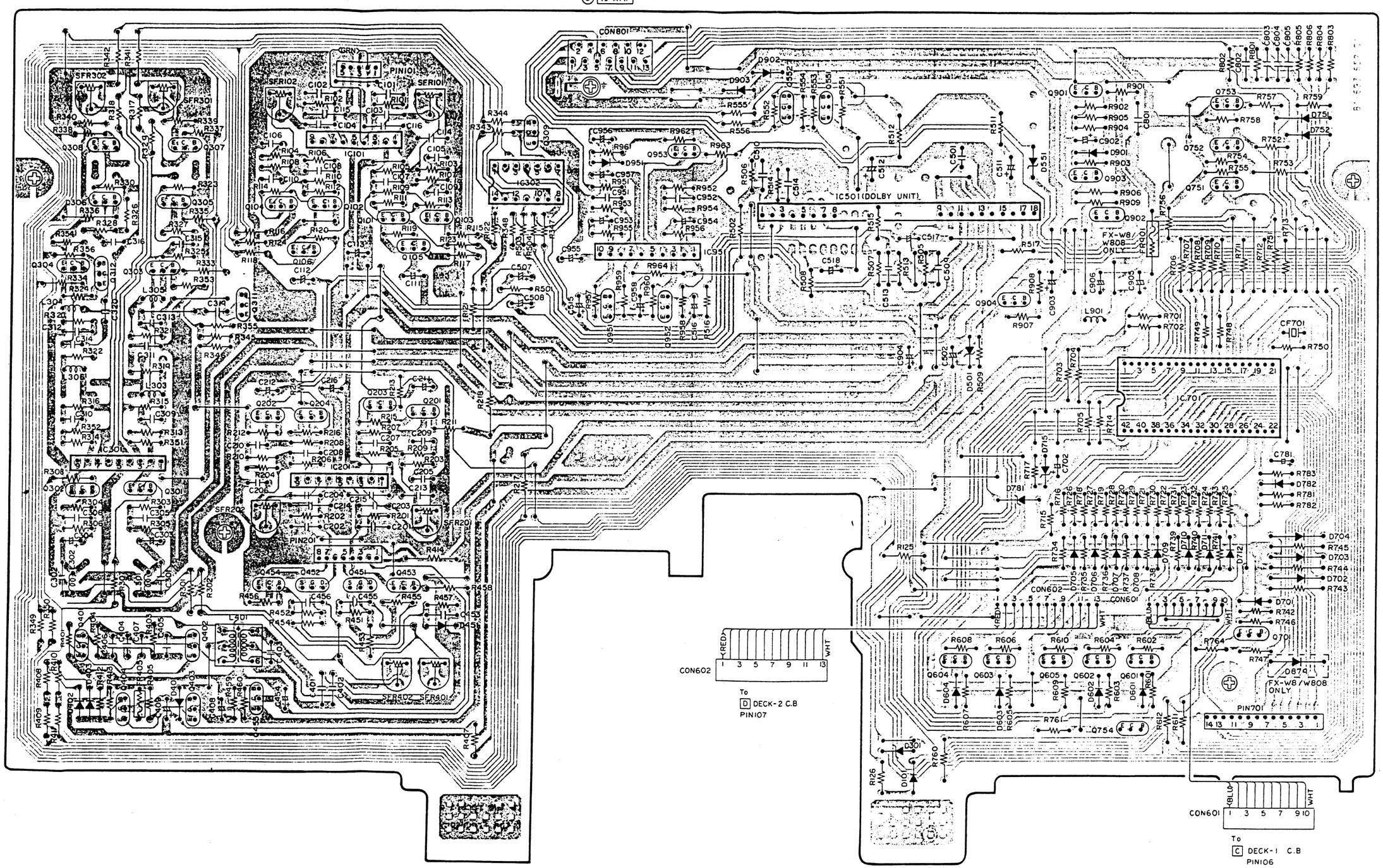
REF.NO.	PART NO.	DESCRIPTION
C408	*87-010-405-019	CAP,ELECT 10-50 SME
C409	*87-010-382-019	CAP,ELECT 22-25 SME
C453	*87-018-131-019	CAP,CERA-SOL SS 1000P
C454	*87-010-401-019	CAP,ELECT 1-50
C455	*87-018-121-019	CAP,CERA-SOL SS 150P
C456	*87-018-121-019	CAP,CERA-SOL SS 150P
C501	*87-010-101-019	CAP,ELECT 220-16
C502	*87-010-371-019	CAP,ELECT 470-6.3
C507	*87-010-404-019	CAP,ELECT 4.7-50 SME
C508	*87-010-404-019	CAP,ELECT 4.7-50 SME
C509	*87-018-127-019	CAP,CERA-SOL SS 470P
C510	*87-018-127-019	CAP,CERA-SOL SS 470P
C511	*87-010-404-019	CAP,ELECT 4.7-50 SME
C512	*87-010-404-019	CAP,ELECT 4.7-50 SME
C513	*87-018-127-019	CAP,CERA-SOL SS 470P
C514	*87-018-127-019	CAP,CERA-SOL SS 470P
C515	*87-010-402-019	CAP,ELECT 2.2-50 SME
C516	*87-010-402-019	CAP,ELECT 2.2-50 SME
C517	*87-010-402-019	CAP,ELECT 2.2-50 SME
C518	*87-010-402-019	CAP,ELECT 2.2-50 SME
C702	*87-010-374-019	CAP,ELECT 47-10
C781	*87-010-401-019	CAP,ELECT 1-50
C802	*87-018-134-019	CAP,CERA-SOL SS 0.01
C803	*87-018-134-019	CAP,CERA-SOL SS 0.01
C804	*87-018-134-019	CAP,CERA-SOL SS 0.01
C805	*87-018-134-019	CAP,CERA-SOL SS 0.01
C901	*87-018-134-019	CAP,CERA-SOL SS 0.01
C902	*87-010-248-019	CAP,ELECT 220-10
C903	*87-010-381-019	CAP,ELECT 330-16 SME
C904	*87-010-237-019	CAP,ELECT 1000-16 SME
C905	*87-010-237-019	CAP,ELECT 1000-16 SME
C906	*87-010-401-019	CAP,ELECT 1-50
C951	*87-018-131-019	CAP,CERA-SOL SS 1000P
C952	*87-018-131-019	CAP,CERA-SOL SS 1000P
C953	*87-010-382-019	CAP,ELECT 22-25 SME
C954	*87-010-382-019	CAP,ELECT 22-25 SME
C955	*87-010-248-019	CAP,ELECT 220-10
C956	*87-010-404-019	CAP,ELECT 4.7-50 SME
C957	*87-010-260-019	CAP,ELECT 47-25
C958	*87-010-263-019	CAP,ELECT 100-10
CF701	*87-030-167-019	CERALOCK CST4.0MHZ
⚠FR405	87-029-089-019	RES,FUSE 4.7-1/4W
⚠FR901	87-029-125-019	RES,FUSE 1-1/4W(W8/808)
L301	*82-231-629-019	COIL 22MMH
L302	*82-231-629-019	COIL 22MMH
L303	*82-226-649-010	COIL 3.3MMH
L304	*82-226-649-010	COIL 3.3MMH
L305	*87-003-131-019	MICRO INDUCTOR 10MMH
L306	*87-003-131-019	MICRO INDUCTOR 10MMH
L401	*81-693-608-019	COIL OSC BIAS 108K
L901	*81-760-621-010	COIL 130UH
SFR101	*87-024-168-019	SFR 1K
SFR102	*87-024-168-019	SFR 1K
SFR201	*87-024-168-019	SFR 1K
SFR202	*87-024-168-019	SFR 1K
SFR301	*87-024-169-019	SFR 2.2K
SFR302	*87-024-169-019	SFR 2.2K
SFR401	*87-024-176-019	SFR 100K
SFR402	*87-024-176-019	SFR 100K
=== FRONT CIRCUIT BOARD SECTION ===		
D866	87-001-124-019	LED SLZ381C(DOLBY-NR B)
D869	87-001-124-019	LED SLZ381C(FWD,D2)
D870	87-001-124-019	LED SLZ381C(REV,D2)

REF.NO.	PART NO.	DESCRIPTION
D871	87-001-124-019	LED SLZ381C(FWD,D1)
D872	87-001-124-019	LED SLZ381C(REV,D1)(W8/808)
D873	87-001-123-019	LED SLZ981C-02TI(CD REC)
D874	87-001-123-019	LED SLZ981C-02TI(TAPE DUBBING)
D875	87-001-123-019	LED SLZ981C-02TI(RECORD)
D876	87-001-294-019	LED SLZ481C-02(PAUSE)
D878	87-001-123-019	LED SLZ981C-02TI(DOLBY-NR C)
S851	87-036-142-010	TACT SW(CD.SYNC.REC HIGH)(W9/8)
S852	87-036-142-010	TACT SW(CD.SYNC.REC NORMAL)
S853	87-036-142-010	TACT SW(TAPE SYNC.DUB8.HIGH)
S854	87-036-142-010	TACT SW(TAPE SYNC.DUB8.NORMAL)
S855	87-036-142-010	TACT SW(STOP/DIR,D1)
S856	87-036-142-010	TACT SW(FFWD,D1)
S857	87-036-142-010	TACT SW(PLAY/DIR,D1)
S858	87-036-142-010	TACT SW(REWIND,D1)
S859	87-036-142-010	TACT SW(REC MUTE,D2)
S860	87-036-142-010	TACT SW(PAUSE,D2)
S861	87-036-142-010	TACT SW(RECORD,D2)
S862	87-036-142-010	TACT SW(STOP/DIR,D2)
S863	87-036-142-010	TACT SW(FFWD,D2)
S864	87-036-142-010	TACT SW(PLAY/DIR,D2)
S865	87-036-142-010	TACT SW(REWIND,D2)
S866	87-036-148-019	SLIDE SW(DOLBY-NR)
S867	87-036-172-019	SLIDE SW(EDIT,CBRS/STSD)
S868	87-036-172-019	SLIDE SW(TIMER)
=== DECK-1 CIRCUIT BOARD SECTION ===		
S1	S6-401-011-740	LEAF SW(PLAY)
S2	S6-401-011-750	LEAF SW(FR)
S3	S6-401-011-730	LEAF SW(CST)
S4	S6-401-011-730	LEAF SW(CRO2)
SFR1	*S6-816-010-010	SFR 4.7K
SFR2	*S6-816-010-010	SFR 4.7K
SOL1	S1-880-210-130	SOLENOID(PLAY)
SOL2	S1-880-210-130	SOLENOID(F/R)
=== DECK-2 CIRCUIT BOARD SECTION ===		
S1	S6-401-011-740	LEAF SW(PLAY)
S2	S6-401-011-750	LEAF SW(FR)
S3	S6-401-011-730	LEAF SW(CST)
S4	S6-401-011-730	LEAF SW(CRO2)
S5	S6-401-011-730	LEAF SW(REA)
S6	S6-401-011-730	LEAF SW(REB)
S7	S6-401-011-730	LEAF SW(MT)
SFR1	*S6-816-010-010	SFR 4.7K
SFR2	*S6-816-010-010	SFR 4.7K
SOL1	S1-880-210-130	SOLENOID(PLAY)
SOL2	S1-880-210-130	SOLENOID(F/R)
=== RELAY(D1) CIRCUIT BOARD SECTION === (W9/909)		
=== RELAY(D2) CIRCUIT BOARD SECTION ===		
=== MISCELLANEOUS ===		
M1	S6-005-030-420	MOTOR MM1-6H2LWK(D1)
M2	S6-005-030-420	MOTOR MM1-6H2LWK(D2)
PH	S6-204-070-090	PB HEAD(D1)(W9/909)
PH	S6-201-033-200	PB HEAD(D1)(W8/808)
RPEH	S6-204-040-010	R/P/E,HEAD(D2)

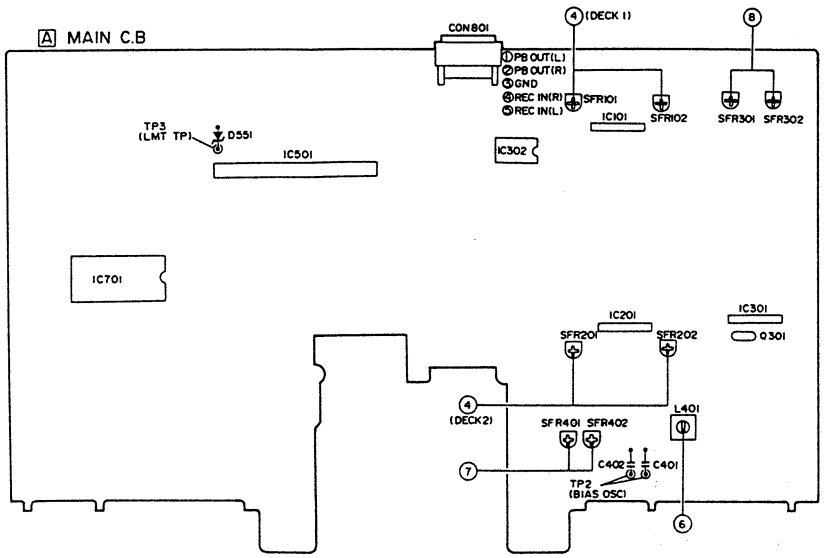
SCHEMATIC DIAGRAM – 1 (FX – W9,W909,W808)

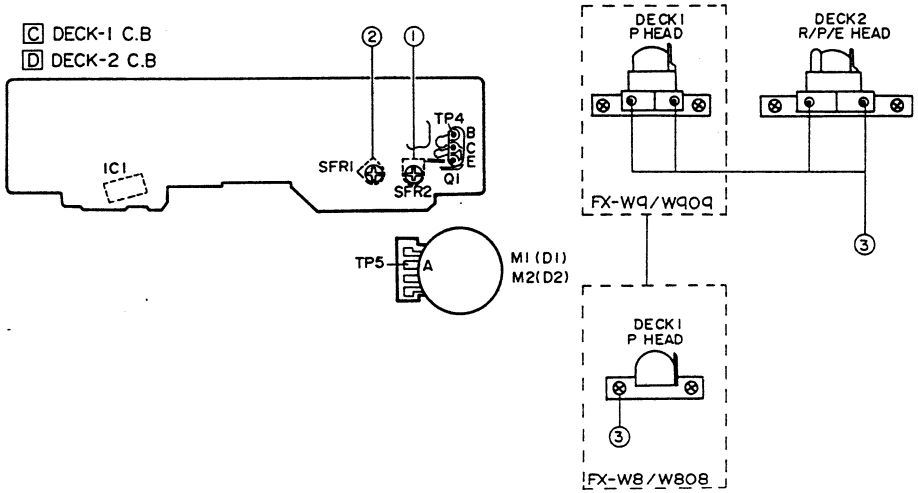


A MAIN C.B


CON801
3 To AMP
CON602
RED
WHT
To
D DECK-2 C.B
PIN107
CON601
BLUE
WHT
To
C DECK-1 C.B
PIN106
IC501 (DOLBY UNIT)
IC95
IC101
IC201
IC701
IC302
IC301
FX-W8/W808 ONLY
PIN701
PIN201
CF701

ADJUSTMENT (FX – W9,W909,W808)





1. Normal Speed Adjustment (DECK-1, DECK-2)
   Settings : · Test tape : TTA-100 (TTA-111S)
   · Test point : PB-OUT (CON801)
   · Adjustment location : SFR2 (DECK-1, DECK-2)
   Method : Play back the test tape, adjust for 3000Hz.

2. High Speed Adjustment (DECK-1, DECK-2)
   Settings : · Test tape : TTA-100 (TTA-111S)
   · Test point : PB-OUT (CON801)
   · Adjustment location : SFR1 (DECK-1, DECK-2)
   Method : Play back the test tape, and make the high speed condition to be shorted between TP4 and TP5. Adjust for 6000Hz.

3. Head Azimuth Adjustment (DECK-1, DECK-2)
   Settings : · Test tape : TTS-310 (TTA-317E, SCC-1429)
   · Test point : PB-OUT (CON801)
   · Adjustment location : Head azimuth adjustment screw
   Method : Play back the 10kHz signal of the test tape and adjust so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

4. Dolby Level Adjustment (DECK-1, DECK-2)
   Settings : · Test tape : TTS-200 (TTA-161, TCC-130)
   · Test point : PB-OUT (CON801)
   · Adjustment location : SFR101 (DECK-1, Lch)
   SFR102 (DECK-1, Rch)
   SFR201 (DECK-2, Lch)
   SFR202 (DECK-2, Rch)
   Method : Play back the test tape and adjust so that the output becomes 500mV±20mV.

5. PB Frequency Response Check (DECK-1, DECK-2)
   Settings : · Test tape : TTS-310 (TTA-317E, SCC-1429)
   · Test point : PB-OUT (CON801)
   Method : Play the 315Hz and 10kHz signals of the test tape and check the output of the 10kHz signal is 0dB±2.5dB with respect to that of the 315Hz signal.

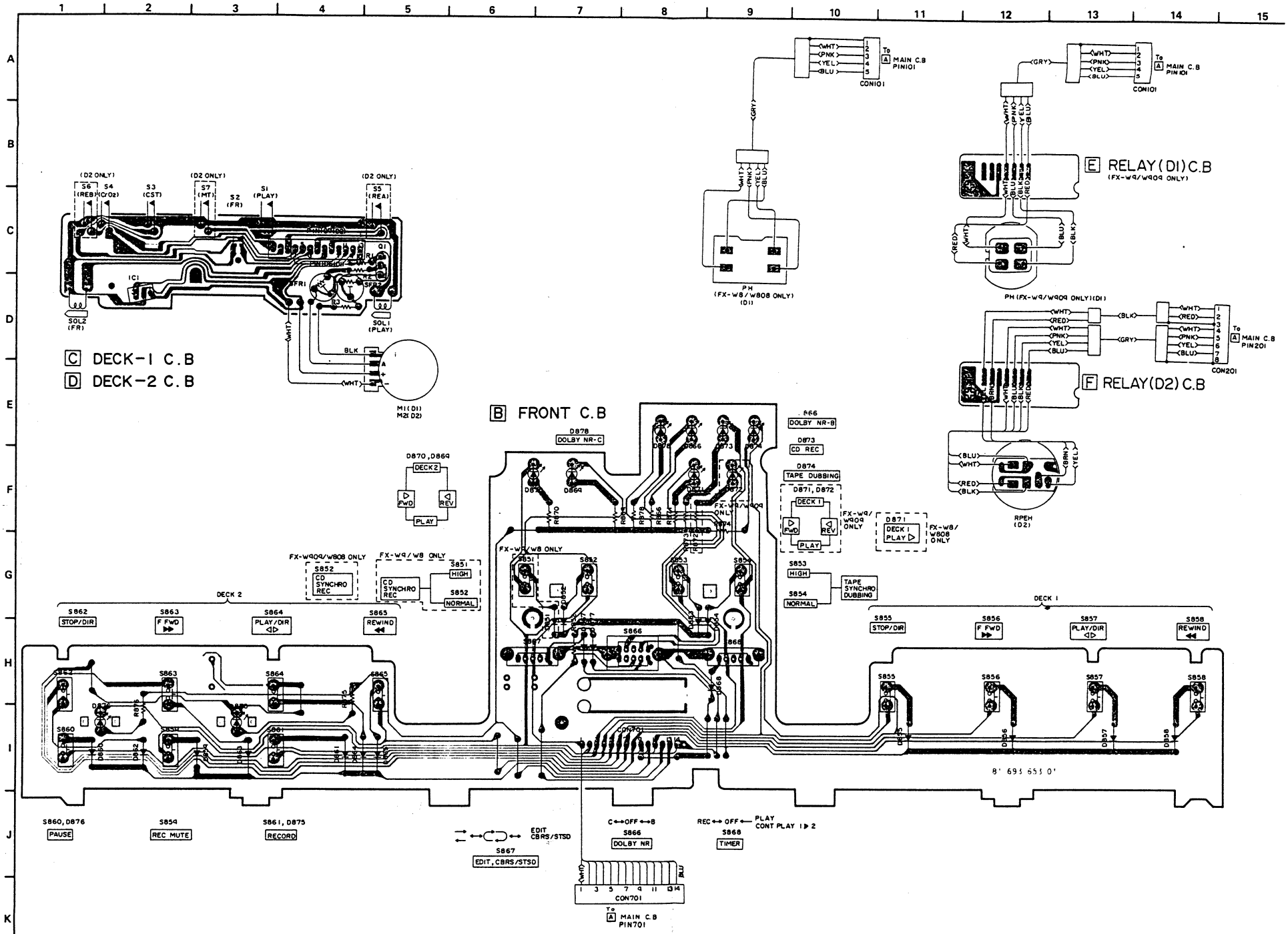
6. Bias Frequency Adjustment (DECK-2)
   Settings : · Test tape : TTA-600 (TTA-119K)
   · Test point : TP2
   · Adjustment location : L401
   Method : Set DECK 2 to the record mode and adjust L401 so that the frequency at TP2 is 108± 1kHz.

7. REC/PB Frequency Response Adjustment (DECK-2)
   Settings : · Test tape : TTA-600 (TTA-119K)
   · Test point : PB-OUT (CON801)
   · Input signal : REC-IN (CON801)
   · Adjustment location : SFR401 (Lch)
   SFR402 (Rch)
   Method : Connect TP3 (LMT TP) to ground (chassis), apply a 1kHz signal and adjust attenuator so that the level at the PB OUT jack is 35mV. Record and play back the 1kHz and 10kHz signals and adjust so that the output level of 10kHz signal is +0.5dB±0.5dB for 1kHz signal.

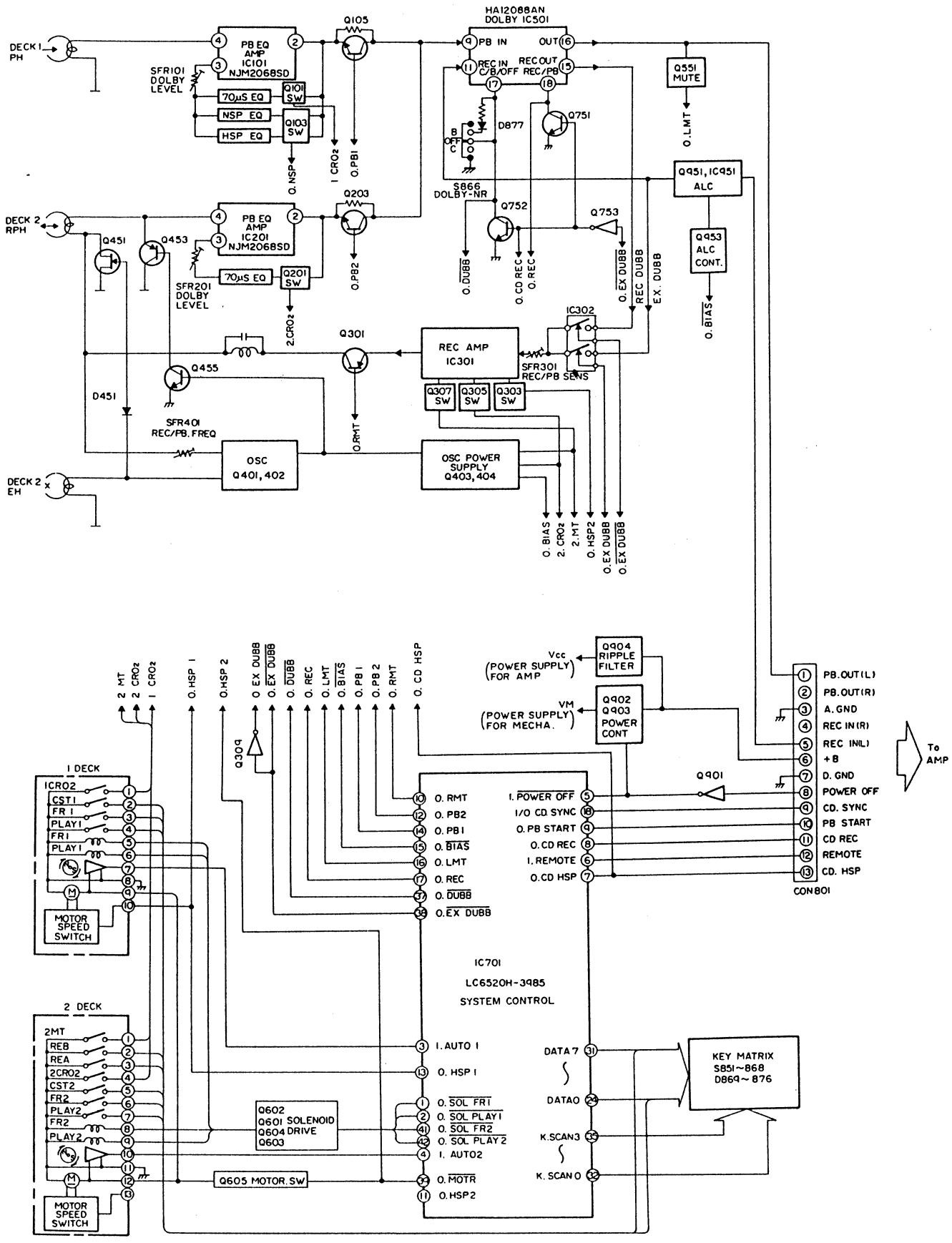
8. REC/PB Sensitivity Adjustment (DECK-2)
   Settings : · Test tape : TTA-600 (TTA-119K)
   · Test point : PB-OUT (CON801)
   · Input signal : REC IN (CON801)
   · Adjustment location : SFR301 (Lch)
   SFR302 (Rch)
   Method : Connect TP3 (LMT TP) to ground (chassis), apply a 1kHz signal and adjust ATT so that the level at the PB OUT jack is 35mV. Record and play the 1kHz signal and adjust SFR301 and SFR302 so that the output level is 35mV± 0.5dB.

PRACTICAL SERVICE FIGURE (FX – W9,W909,W808)

PB output level :	500mV±50mV TTS-200 (TCC-130, TTA-161)(PB OUT)
REC/PB output level :	350mV±50mV (PB OUT -13dBV 1kHz)
Distortion (REC/PB) :	Less than 2% (NORM., MT) Less than 2.5% (CrO_2)
Noise (PB) :	Less than 1.5mV/2.5mV (DOLBY B NR ON/OFF CrO_2) Less than 2.0mV/3.0mV (DOLBY B NR ON/OFF NORM.)
Erasing ratio :	More than 60dB (125Hz)
Channel separation :	More than 30dB (1kHz, 0VU)
Recording bias frequency:	108kHz
Noise (REC/PB) :	Less than 2.0mV/3.0mV (DOLBY B NR ON/OFF CrO_2) Less than 2.5mV/3.5mV (DOLBY B NR ON/OFF NORM.)
Crosstalk :	More than 60dB (1kHz, 0VU)
Wow & flutter (W-RMS):	Less than 0.13% (DECK 1, 2)
Tape speed :	3000Hz±1.5% TTA-100 (TTA-111S)
Take-up torque :	30~60 g-cm (DECK 1, 2)
F.F & REW torque :	55~120 g-cm (DECK 1, 2)
Back tension :	2~6 g-cm (DECK 1, 2)
Test tape :	NORMAL TTA-600 (TTA-119K) CrO_2 TTA-610 (TTA-119H) MT TTA-620 (TTA-119MP)


C DECK-1 C.B
D DECK-2 C.B
B FRONT C.B
E RELAY(D1)C.B
(FX-W9/W909 ONLY)
F RELAY(D2) C.B
PH (FX-W8/W808 ONLY) (D1)
PH (FX-W9/W909 ONLY) (D1)
RPEH (D2)
M1(D1) M2(D2)
CON101
CON201
CON701
To A MAIN C.B PIN101
To A MAIN C.B PIN201
To A MAIN C.B PIN701
DECK 2
DECK 1
S862 STOP/DIR
S863 F FWD
S864 PLAY/DIR
S865 REWIND
S855 STOP/DIR
S856 F FWD
S857 PLAY/DIR
S858 REWIND
S860, D876 PAUSE
S859 REC MUTE
S861, D875 RECORD
S867 EDIT, CBRS/STSD
S866 DOLBY NR
S868 TIMER
D878 DOLBY NR-C
D866 DOLBY NR-B
D873 CD REC
D874 TAPE DUBBING
D871, D872
D870, D869
S852 CD SYNCHRO REC
S851 HIGH
S852 NORMAL
S853 HIGH
S854 NORMAL
TAPE SYNCHRO DUBBING
FX-W9/W909 ONLY
FX-W8/W808 ONLY
FX-W9/W8 ONLY
FX-W8/W808 ONLY
8' 693 653 01

BLOCK DIAGRAM (FX – W9,W909,W808)



IC DESCRIPTION (FX – W9,W909,W808)

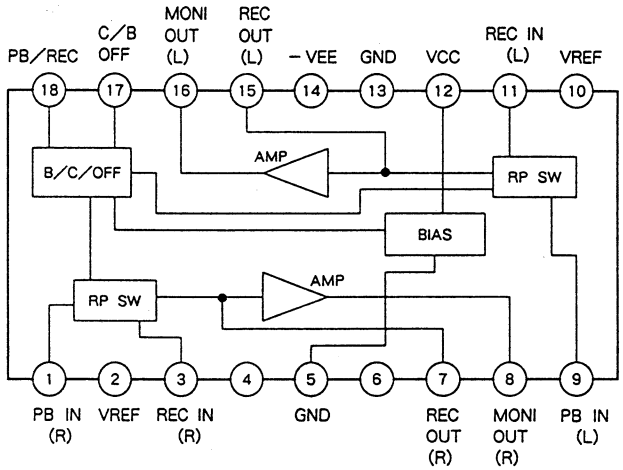
IC, LC6520H – 3985

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{SOL·FR1}}$	O	DECK 1 FR solenoid control output. (active "L")
2	$\overline{\text{SOL·PLAY1}}$	O	DECK 1 PLAY solenoid control output. (active "L")
41	$\overline{\text{SOL·FR2}}$	O	DECK 2 FR solenoid control output. (active "L")
42	$\overline{\text{SOL·PLAY2}}$	O	DECK 2 PLAY solenoid control output. (active "L")
3	AUTO 1	I	DECK 1 reel disk pulse input.
4	AUTO 2	I	DECK 2 reel disk pulse input.
5	$\overline{\text{POWER·OFF}}$	I	POWER OFF signal input. (Goes "L" when OFF)
6	REMOTE	I	Remote control serial input.
7	CD·HSP	O	CD high-speed control terminal. (active "H") Outputs "H" during CD DUB.
8	CD·REC	O	Output to switch the function of amplifier to CD. (active "H") Outputs "H" during CD DUB.
9	PB·START	O	Output to switch the function of amplifier to TAPE (active "H")
10	RMT	O	REC MUTE output. Goes "H" during REC MUTE and REC PAUSE.
11	HSP 2	O	Controls the DECK 2 motor speed and playback/recording EQ. Goes "H" during high-speed DUB and CD high-speed REC.
12	PB 2	O	DECK 2 play output. Goes "H" during PB.
13	HSP 1	O	Controls the DECK 1 motor speed and playback/recording EQ. Goes "H" during high-speed DUB.
14	PB 1	O	DECK 2 playback output. Goes "H" during PB and DUB.
15	$\overline{\text{BIAS}}$	O	DECK 2 bias oscillation on/off output. Goes "L" during REC and DUB.
16	LMT	O	Line-out muting output.
17	REC	O	Dolby NR circuit REC/PB switching output. Goes "H" during REC. Goes "L" when dubbing is commanded by the dubbing button.
18	CD·SYNC	I/O	CD SYNC REC input/output, CD BACK SKIP output.
19	TEST	–	MPU test pin to be connected to Vss.
20	Vss	–	Common pin for each input/output and power supply of MPU.
21	OSC 1	–	4MHz clock oscillator is connected.
22	OSC 2	–	
23	$\overline{\text{RESET}}$	I	MPU reset input. "L" input resets the MPU.
32	K·SCAN 0	O	KEY SCAN outputs for DATA 0~DATA 7. These pins output "H" when reset.
33	K·SCAN 1	O	
34	K·SCAN 2	O	
35	K·SCAN 3	O	
36	NC	–	Unused.
37	$\overline{\text{DUBB}}$	O	Noise reduction control output during dubbing. Goes "H" when dubbing is commanded by the PLAY and REC buttons. Goes "L" when dubbing is commanded by the dubbing button.
38	$\overline{\text{EX·DUBB}}$	O	Output to switch the DECK 2 recording input. Goes "L" when dubbing is commanded by the PLAY and REC buttons. Goes "H" in other mode.
39	$\overline{\text{MOTOR}}$	O	DECKs 1 and 2 main motor control output. Goes "H" in the STOP mode and "L" in other modes.
40	VDD	–	Power supply pin.

Pin No.	Pin Name	Description				
		KEY DATA IN				LED INDI. OUT Lights at "L"
		K SCAN 0 is "L"	K SCAN 1 is "L"	K SCAN 2 is "L"	K SCAN 3 is "L"	
24	DATA 0	PLAY 1 SW IN	MECHA 1 SW IN	RWD 2 KEY IN	RWD 1 KEY IN	PAUSE 2 lights
25	DATA 1	FR 1 SW IN	–	PLAY 2 KEY IN	PLAY 1 KEY IN	REC 2 lights
26	DATA 2	CST 1 SW IN	–	FF 2 KEY IN	FF 1 KEY IN	TAPE DUBB lights
27	DATA 3	PLAY 2 SW IN	–	STOP 2 KEY IN	STOP 1 KEY IN	CD DUBB lights
28	DATA 4	FR 2 SW IN	TIMER PLAY SW IN	REC 2 KEY IN	N·DUBB KEY IN	R·PLAY 1 lights
29	DATA 5	CST 2 SW IN	TIMER REC SW IN	PAUSE 2 KEY IN	H·DUBB KEY IN	F·PLAY 1 lights
30	DATA 6	REA 2 SW IN	⟸ SW IN	RMT 2 KEY IN	CD·N·DUBB KEY IN	R·PLAY 2 lights
31	DATA 7	REB 2 SW IN	⟲ SW IN	–	CD·H·DUBB KEY IN	F·PLAY 2 lights

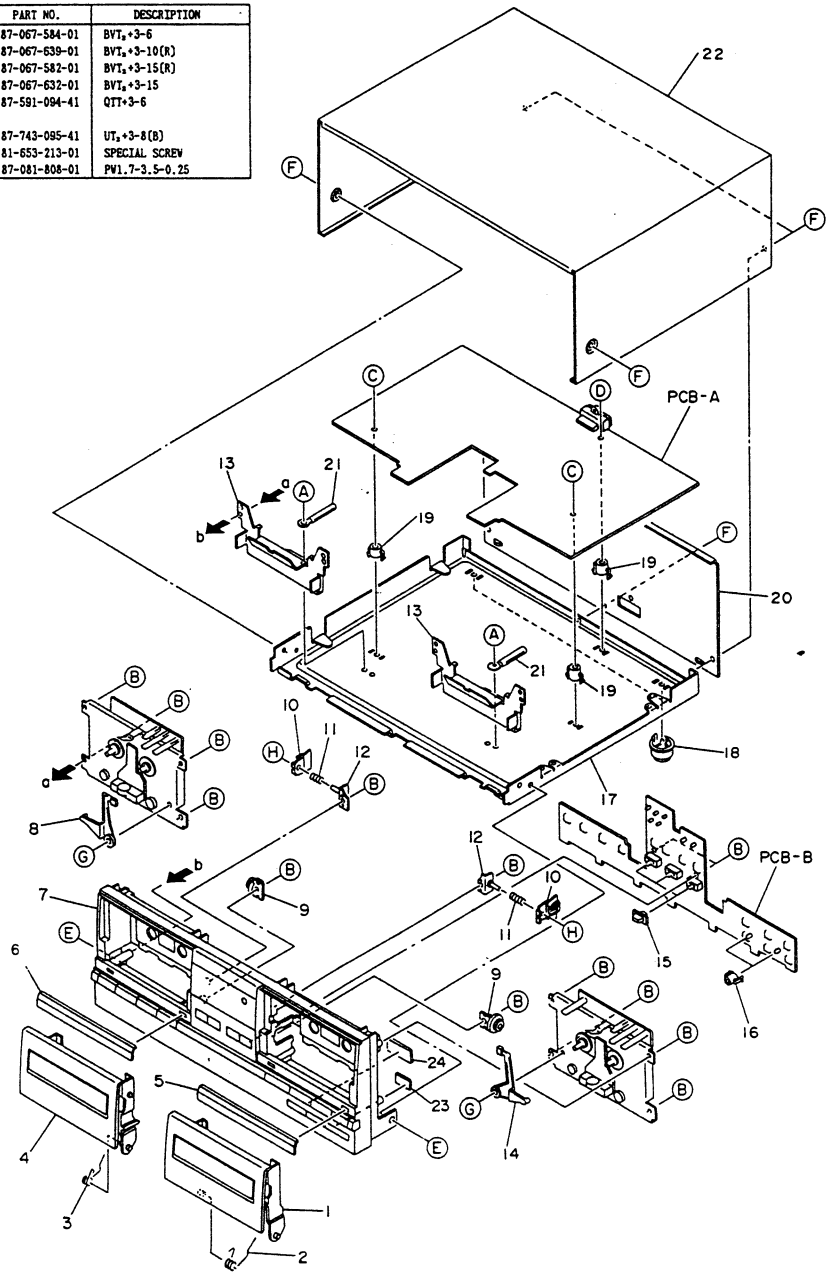
IC BLOCK DIAGRAM (FX – W9,W909,W808)

IC, HA12088



EXPLODED VIEW – 1 (FX – W9,W909,W808)

REF.NO.	PART NO.	DESCRIPTION
A	87-067-584-01	BVT$_2$+3-6
B	87-067-639-01	BVT$_2$+3-10(R)
C	87-067-582-01	BVT$_2$+3-15(R)
D	87-067-632-01	BVT$_2$+3-15
E	87-591-094-41	QTT+3-6
F	87-743-095-41	UT$_2$+3-8(B)
G	81-653-213-01	SPECIAL SCREW
H	87-081-808-01	PW1.7-3.5-0.25

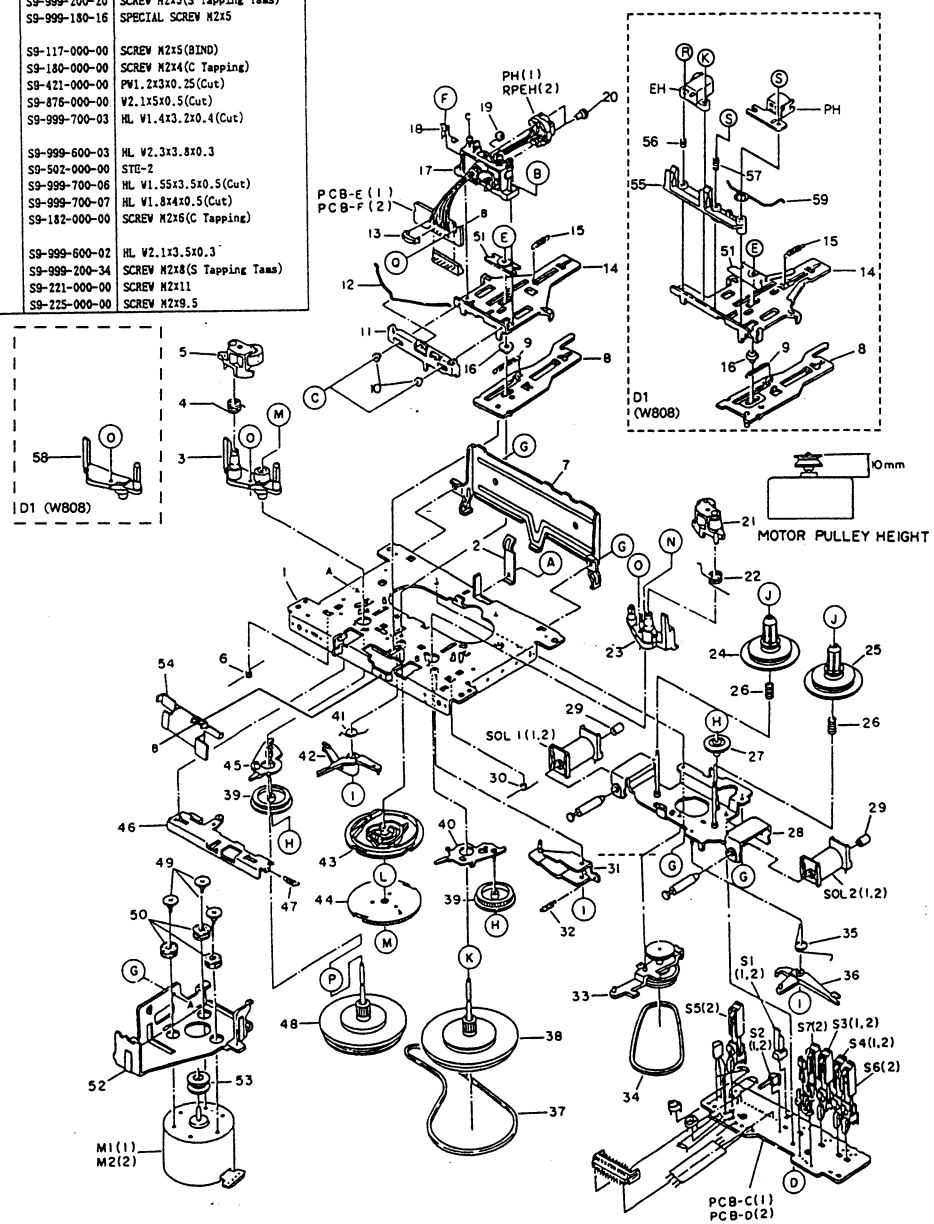


MECHANICAL PARTS LIST (FX – W9,W909,W808)

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	1-1	*09-047-449-010	CASSETTE BOX 2 ASSY(W9,909)	*	1
	1-1	*09-047-548-010	CASSETTE BOX 2 ASSY(W808)	*	1
	1-2	*81-693-213-019	T-SPRING(2),EX	*	1
	1-3	*81-693-212-019	T-SPRING(1),EX	*	1
	1-4	*09-047-457-010	CASSETTE BOX 1 ASSY(W9Y)	*	1
	1-4	*09-047-489-010	CASSETTE BOX 1 ASSY(W909Y,YJ,YK)	*	1
	1-4	*09-047-546-010	CASSETTE BOX 1 ASSY(W808)	*	1
	1-5	*81-693-019-019	PLATE,BOX(2)	*	1
	1-6	*81-693-018-019	PLATE,BOX(1)	*	1
	1-7	*09-047-458-010	CABINET FRONT ASSY	*	1
	1-7	*09-047-543-010	CABINET FRONT ASSY(W808)	*	1
	1-8	*81-653-212-010	LEVER,EJECT(1)		1
	1-9	*87-063-143-010	OIL-DUMPER 75		2
	1-10	*81-715-214-110	PLATE,LOCK		2
	1-11	*81-715-234-010	C-SPRING,LOCK PLATE		2
	1-12	*81-693-209-010	HOLDER LOCK ASSY	*	2
	1-13	*81-693-202-019	HOLDER,MECHANISM	*	2
	1-14	*81-653-214-110	LEVER,EJECT(2)		1
	1-15	*81-693-009-019	KNOB,REVERSE	*	3
	1-16	*81-693-211-019	GUIDE,LED	*	2
	1-17	---	CHASSIS,AMP		1
	1-18	*81-669-025-010	FOOT,H11		2
	1-19	*81-664-202-010	HOLDER,PCB		3
	1-20	*81-693-029-010	PANEL,REAR(W9Y)	*	1
	1-20	*81-693-033-010	PANEL,REAR(W9YJ)	*	1
	1-20	*81-693-046-010	PANEL,REAR(W909YK)	*	1
	1-20	*81-693-017-010	PANEL,REAR(W909Y)	*	1
	1-20	*81-693-048-010	PANEL,REAR(W909YJ)	*	1
	1-20	*81-693-030-010	PANEL,REAR(W808)	*	1
	1-21	---	WIRE BINDER		2
	1-22	*81-693-032-110	CABINET,STEEL(W9Y)	*	1
	1-22	*81-670-003-110	CABINET,STEEL(EXCEPT W9Y)		1
	1-23	*82-598-243-019	G CUSHION,7X8X2.5		1
	1-24	*81-693-604-019	S CUSHION,30-20-3 EARTH	*	1

EXPLODED VIEW – 2 (FX – W9,W909,W808)

REF.NO.	PART NO.	DESCRIPTION
A	S9-178-000-00	SPECIAL SCREW M2x3(C Tapping)
B	S9-078-000-00	SCREW M2x5(Tams)
C	S9-547-000-00	SCREW M1.7x3(Camera)
D	S9-999-200-20	SCREW M2x5(S Tapping Tams)
E	S9-999-180-16	SPECIAL SCREW M2x5
F	S9-117-000-00	SCREW M2x5(BIND)
G	S9-180-000-00	SCREW M2x4(C Tapping)
H	S9-421-000-00	PW1.2x3x0.25(Cut)
I	S9-876-000-00	W2.1x5x0.5(Cut)
J	S9-999-700-03	HL W1.4x3.2x0.4(Cut)
K	S9-999-600-03	HL W2.3x3.8x0.3
L	S9-502-000-00	STE-2
M	S9-999-700-06	HL W1.55x3.5x0.5(Cut)
N	S9-999-700-07	HL W1.8x4x0.5(Cut)
O	S9-182-000-00	SCREW M2x6(C Tapping)
P	S9-999-600-02	HL W2.1x3.5x0.3
Q	S9-999-200-34	SCREW M2x8(S Tapping Tams)
R	S9-221-000-00	SCREW M2x11
S	S9-225-000-00	SCREW M2x9.5



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	2-1	*S1-880-015-010	CHASSIS ASSY		1
	2-2	*S1-829-100-010	PACK SPRING		1
	2-3	*S1-880-090-210	FL METAL ASSY R(EXCEPT W808 DECK1)		1
	2-4	*S1-880-040-040	P ARM SPRING R(EXCEPT W808 DECK1)		1
	2-5	S1-880-043-020	PINCH ROLLER ARM ASSY R (EXCEPT W808 DECK1)		1
	2-6	*S1-880-050-190	TG ARM SPRING R(EXCEPT W808 DECK1)		1
	2-7	*S1-880-530-020	SW PROTECTOR		1
	2-8	*S1-880-025-010	HEAD PANEL ASSY B		1
	2-9	*S1-880-020-050	PANEL SPRING		1
	2-10	*S1-865-020-280	CHP LEVER COLLAR(EXCEPT W808 DECK1)		2
	2-11	*S1-880-020-060	CHP LEVER(EXCEPT W808 DECK1)		1
	2-12	*S1-880-040-050	PINCH ROLLER SPRING (EXCEPT W808 DECK1)		1
	2-13	---	WIRE CLUMP(EXCEPT W808 DECK1)		1
	2-14	*S1-880-020-010	HEAD PANEL A(EXCEPT W808 DECK1)		1
	2-14	*S1-880-020-070	HEAD PANEL(W808 DECK1 ONLY)		1
	2-15	*S1-880-020-040	RC SPRING		1
	2-16	*S1-880-020-190	PANEL COLLAR A		1
	2-17	*S1-865-023-060	HEAD BASE ASSY(EXCEPT W808 DECK1)		1
	2-18	*S1-865-020-600	CLUMP SPRING(EXCEPT W808 DECK1)		1
	2-19	*S1-865-090-610	SPACER(EXCEPT W808 DECK1)		1
	2-20	*S9-999-180-170	HEAD COLLAR SCREW(EXCEPT W808 DECK1)		2
	2-21	S1-880-043-010	PINCH ROLLER ARM ASSY F		1
	2-22	*S1-880-040-030	P ARM SPRING F		1
	2-23	*S1-880-090-080	FL METAL ASSY		1
	2-24	S1-880-053-020	T REEL ASSY R		1
	2-25	S1-880-053-060	T REEL ASSY F		1
	2-26	*S1-880-050-220	BT SPRING R		2
	2-27	*S1-880-050-080	FF GEAR		1
	2-28	*S1-880-055-010	REEL BASE ASSY		1
	2-29	*S1-880-210-060	PLANGER HOLDER		2
	2-30	*S1-880-050-180	TG ARM SPRING F		1
	2-31	*S1-880-215-020	P KICK LEVER ASSY(EXCEPT W808 DECK1)		1
	2-31	*S1-880-215-030	P KICK LEVER ASSY(W808 DECK1 ONLY)		1
	2-32	*S1-880-210-110	PK LEVER SPRING		1
	2-33	*S1-880-073-020	RF CLUTCH ASSY(EXCEPT W808 DECK1)		1
	2-33	*S1-880-070-301	RF CLUTCH ASSY(W808 DECK1 ONLY)		1
	2-34	S1-880-070-080	RF BELT(EXCEPT W808 DECK1)		1
	2-34	S1-880-070-070	RF BELT(W808 DECK1 ONLY)		1
	2-35	*S1-880-050-170	FR ARM TRIGGER SPRING		1
	2-36	*S1-880-050-150	RF TRIGGER ARM		1
	2-37	S1-880-090-380	MAIN BELT(EXCEPT W808 DECK1)		1
	2-37	S1-880-090-440	MAIN BELT(W808 DECK1 ONLY)		1
	2-38	S1-880-093-070	FLYWHEEL ASSY F		1
	2-39	*S1-880-050-140	T GEAR(EXCEPT W808 DECK1)		2
	2-40	*S1-880-055-020	T GEAR ARM ASSY F		1
	2-41	*S1-880-010-060	M TRIGGER ARM SPRING		1
	2-42	*S1-880-210-030	M TRIGGER ARM		1
	2-43	*S1-880-210-150	M GEAR		1
	2-44	*S1-880-210-160	RF CAM GEAR		1
	2-45	*S1-880-055-030	T GEAR ARM ASSY R(EXCEPT W808 DECK1)		1
	2-46	*S1-880-215-010	CH SLIDE LEVER ASSY(EXCEPT W808 DECK1)		1
	2-47	*S1-880-210-080	CH SLIDE LEVER SPRING(EXCEPT W808 DECK1)		1
	2-48	S1-880-093-080	FLYWHEEL ASSY R(EXCEPT W808 DECK1)		1
	2-49	*S1-851-140-180	MOTOR COLLAR SCREW.		3
	2-50	*S1-821-120-660	MOTOR RUBBER		3
	2-51	*S1-880-020-160	PANEL SPRING PLATE		1
	2-52	*S1-880-090-110	MOTOR BRACKET		1
	2-53	*S1-880-090-370	MOTOR PULLEY		1
	2-54	*S1-880-020-180	SHIELD PLATE		1
	2-55	*S1-880-020-080	HEAD BASE(W808 DECK1 ONLY)		1
	2-56	*S1-821-030-080	EH SPRING(W808 DECK1 ONLY)		1
	2-57	*S1-821-030-070	AZIMUTH SPRING(W808 DECK1 ONLY)		1
	2-58	*S1-880-010-070	TAPE GUIDE(W808 DECK1 ONLY)		1
	2-59	*S1-880-040-060	PINCH ROLLER SPRING(W808 DECK1 ONLY)		1

MODEL NO.

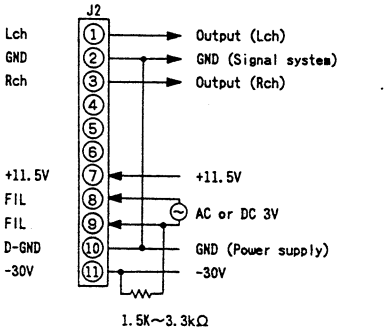
TX – D9F,L

COUTIONS WHEN SERVICING (TX – D9F,L)

Model TX-D9F,L does not have a power supply circuit. Power is supplied to it through a 11-pin flat cable and the signal inputs/outputs are also performed through this cable.
When servicing the TX-D9F,L connect it to the MX-D9, MX-D909 so power is supplied to the TX-D9F,L. If the MX-D9, MX-D909 is not available, follow the procedure below.

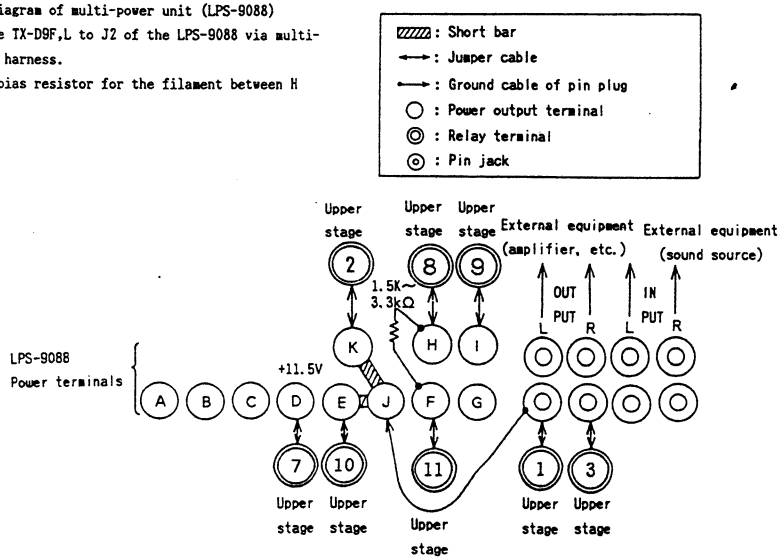
(When servicing the unassembled TX-D9F,L)

① Supply the following voltages to each J2 terminal from an external power supply.



② Connection diagram of multi-power unit (LPS-9088)

- Connect the TX-D9F,L to J2 of the LPS-9088 via multi-conversion harness.
- Connect a bias resistor for the filament between H and F.



ELECTRICAL MAIN PARTS LIST (TX – D9F,L)

REF.NO.	PART NO.	DESCRIPTION
		=== IC ===
	87-001-532-010	IC,AIQH3021HO
	87-020-566-019	IC,LA1265
	87-001-376-019	IC,LC7218
	87-020-446-019	IC,TA7343AP
	87-001-727-010	IC,UPD75206 CW-115
		=== TRANSISTOR ===
	87-026-165-019	FET,3SK73GR(Z)
	89-501-615-019	FET,2SK161GR
	89-502-415-019	FET,2SK241GR
	89-502-464-019	FET,2SK246Y
	89-318-154-019	TRANSISTOR,2SC1815Y
	89-318-155-019	TRANSISTOR,2SC1815GR
	89-319-233-019	TRANSISTOR,2SC1923(O)
	89-320-011-019	TRANSISTOR,2SC2001K
	87-026-214-019	TRANSISTOR,DTA114YS
	87-026-215-019	TRANSISTOR,DTC114YS
		=== DIODE ===
	87-020-465-019	DIODE,1SS133
	87-027-417-019	DIODE,ZENER HZ-11A1L
	87-027-702-019	DIODE,ZENER HZ-6C2L
	87-027-584-019	DIODE,ZENER HZ-9C1L
		=== MAIN CIRCUIT BOARD SECTION ===
AT901	*87-033-202-019	ANT.,TERMINAL 4P(U)
AT901	*81-631-646-019	ANT.,TERMINAL 2P PAL(E,K,Z)
C101	*87-010-544-019	CAP,ELECT 0.1-50V
C102	*87-014-049-019	CAP,PP 470P(U)
C102	*87-014-050-019	CAP,PP 510P(E,K,Z)
C103	*87-018-107-019	CAP,CERA SS 18P SL(U)
C105	*87-018-108-019	CAP,CERA SS 20P(E,K,Z)
C106	*87-018-121-019	CAP,CERA SS 150P(E,K,Z)
C107	*87-014-050-019	CAP,PP 510P(E,K,Z)
C108	*87-018-134-019	CAP,CERA SS 0.01(E,K,Z)
C109	*87-010-405-019	CAP,ELECT 10-50V SME(E,K,Z)
C201	*87-018-103-019	CAP,CERA SS 8.2P(E,K,U)
C201	*87-018-105-019	CAP,CERA SS 12P(Z)
C202	*87-018-134-019	CAP,CERA SS 0.01
C203	*87-018-102-019	CAP,CERA SS 6.8P(E,K,U)
C203	*87-018-105-019	CAP,CERA SS 12P(Z)
C204	*87-018-102-019	CAP,CERA SS 6.8P(E,K,U)
C205	*87-018-098-019	CAP,CERA SS 3.3P(E,K,U)
C205	*87-018-097-019	CAP,CERA SS 2.2P(Z)
C206	*87-018-100-019	CAP,CERA SS 4.7P K 50V SL(E,K,U)
C206	*87-018-106-019	CAP,CERA SS 15PF SL(Z)
C207	*87-018-096-019	CAP,CERA SS 1P
C208	*87-018-119-019	CAP,CERA SS 100P
C209	*87-018-134-019	CAP,CERA SS 0.01
C210	*87-018-116-019	CAP,CERA SS 56P
C211	*87-018-107-019	CAP,CERA SS 18P
C212	*87-018-134-019	CAP,CERA SS 0.01
C213	*87-018-134-019	CAP,CERA SS 0.01
C214	*87-010-401-019	CAP,ELECT 1-50V
C215	*87-018-134-019	CAP,CERA SS 0.01(Z)
C215	*87-018-131-019	CAP,CERA SS 1000P(E,K)
C220	*87-018-100-019	CAP,CERA SS 4.7PF K 50V SL(Z)
C222	*87-018-134-019	CAP,CERA SS 0.01(Z)
C224	*87-018-105-019	CAP,CERA SS 12P(Z)
C251	*87-018-134-019	CAP,CERA SS 0.01
C252	*87-010-374-019	CAP,ELECT 47-10V
C253	*87-018-116-019	CAP,CERA SS 56P(U)

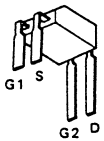
REF.NO.	PART NO.	DESCRIPTION
C301	*87-010-401-019	CAP,ELECT 1-50V
C302	*87-018-134-019	CAP,CERA SS 0.01
C303	*87-018-134-019	CAP,CERA SS 0.01
C304	*87-010-382-019	CAP,ELECT 22-25V SME
C305	*87-018-125-019	CAP,CERA SS 330P
C306	*87-010-402-019	CAP,ELECT 2.2-50V SME
C307	*87-010-402-019	CAP,ELECT 2.2-50V SME
C309	*87-018-134-019	CAP,CERA SS 0.01
C310	*87-010-403-019	CAP,ELECT 3.3-50V SME
C311	*87-010-544-019	CAP,ELECT 0.1-50V
C312	*87-010-405-019	CAP,ELECT 10-50V SME
C313	*87-010-404-019	CAP,ELECT 4.7-50V SME
C314	*87-018-134-019	CAP,CERA SS 0.01
C315	*87-018-134-019	CAP,CERA SS 0.01
C316	*87-010-401-019	CAP,ELECT 1-50V
C317	*87-018-134-019	CAP,CERA SS 0.01
C318	*87-010-405-019	CAP,ELECT 10-50V SME(E,K,U)
C319	*87-018-134-019	CAP,CERA SS 0.01
C321	*87-010-405-019	CAP,ELECT 10-50V SME(Z)
C322	*87-018-134-019	CAP,CERA SS 0.01(Z)
C401	*87-010-401-019	CAP,ELECT 1-50V
C402	*87-010-403-019	CAP,ELECT 3.3-50V SME
C403	*87-010-248-019	CAP,ELECT 220-10V
C404	*87-014-057-019	CAP,PP 1000P
C405	*87-010-405-019	CAP,ELECT 10-50V SME
C406	*87-018-134-019	CAP,CERA SS 0.01
C409	*87-010-402-019	CAP,ELECT 2.2-50V SME
C410	*87-010-402-019	CAP,ELECT 2.2-50V SME
C503	*87-010-402-019	CAP,ELECT 2.2-50V SME
C504	*87-010-402-019	CAP,ELECT 2.2-50V SME
C505	*87-018-134-019	CAP,CERA SS 0.01
C601	*87-018-106-089	CAP,CERA SS 15PF SL
C602	*87-018-134-019	CAP,CERA SS 0.01(U)
C603	*87-018-134-019	CAP,CERA SS 0.01
C604	*87-010-545-019	CAP,ELECT 0.22-50V SME
C605	*87-018-134-019	CAP,CERA SS 0.01
C606	*87-010-404-019	CAP,ELECT 4.7-50V SME
C607	*87-010-260-019	CAP,ELECT 47-25V
C608	*87-010-263-019	CAP,ELECT 100-10V
C609	*87-018-134-019	CAP,CERA SS 0.01
C610	*87-018-134-019	CAP,CERA SS 0.01
C611	*87-018-134-019	CAP,CERA SS 0.01
C612	*87-018-134-019	CAP,CERA SS 0.01
C801	*87-010-382-019	CAP,ELECT 22-25V SME
C802	*87-018-134-019	CAP,CERA SS 0.01
C803	*87-010-237-019	CAP,ELECT 1000-16 SME
C804	*87-018-134-019	CAP,CERA SS 0.01
C805	*87-018-134-019	CAP,CERA SS 0.01
C901	*87-018-134-019	CAP,CERA SS 0.01
C902	*87-018-134-019	CAP,CERA SS 0.01
C903	*87-018-134-019	CAP,CERA SS 0.01(U)
C904	*87-018-134-019	CAP,CERA SS 0.01
C908	*87-018-134-019	CAP,CERA SS 0.01(U)
C908	*87-018-131-019	CAP,CERA SS 1000P(E,K,Z)
C909	*87-018-131-019	CAP,CERA SS 1000P
C910	*87-018-134-019	CAP,CERA SS 0.01(E,K,Z)
C912	*87-018-134-019	CAP,CERA SS 0.01(Z)
CF251	*87-008-261-019	FILTER,SFE 10.7MA5-A
CF252	*87-008-261-019	FILTER,SFE 10.7MA5-A
CF253	*82-799-621-019	FILTER,CERAMIC MS2-A(Z)
CF301	*82-794-670-019	FILTER,8FU 450C4N
CON901	87-009-063-019	CONNECTOR FG 11P(TO AMP)
D101	81-754-634-019	VARI,CAP KV1260
D201	87-027-900-019	VARI,CAP 1SV147

REF.NO.	PART NO.	DESCRIPTION
D202	87-027-900-019	VARI,CAP 1SV147
D203	87-027-900-019	VARI,CAP 1SV147
D221	*87-027-900-019	VARI,CAP 1SV147(Z)
FI221	*87-030-105-010	FILTER,BPM86A(Z)
L101	*87-006-182-019	COIL,AM ANT 2B(U)
L102	*87-006-176-019	COIL,MW ANT(E,K,Z)
L103	*87-006-177-019	COIL,LW ANT(E,K,Z)
L104	*82-794-687-019	COIL,OSC MW
L105	*82-794-688-019	COIL,OSC LW(E,K,Z)
L201	*82-794-716-019	COIL,ANT 3/4 T
L202	*82-794-717-019	COIL,ANT 2-3/4 SPACE
L203	*82-791-627-019	COIL,FM ANT 2
L204	*82-702-638-019	COIL,FM
L205	*82-794-683-019	IFT,FM 6T
L206	*87-007-259-019	COIL,FM OSC (7K)N
L207	*87-005-151-019	COIL,2.2UH
L221	*82-702-638-019	COIL,FM(Z)
L222	*87-005-151-019	COIL,2.2UH(Z)
L301	*81-631-611-019	COIL,QUAD (SINGLE)
L302	*87-008-405-019	FILTER,CERAMIC CFBZ-450D
L321	*82-794-697-019	FILTER,ANTI BIRDIE(Z)
L322	*87-005-151-019	COIL 2.2UH(Z)
L501	*87-008-253-019	LPF
SFR301	*87-024-174-019	SFR,33K
SFR401	*87-024-171-019	SFR,4.7K
TC101	*87-011-221-019	CAP,TRIMMER 30P(U)
TC102	*87-011-220-019	CAP,TRIMMER 20P(E,K,Z)
TC103	*87-011-221-019	CAP,TRIMMER 30P(E,K,Z)
TC201	*87-011-219-019	CAP,TRIMMER 10P
TC202	*87-011-219-019	CAP,TRIMMER 10P
TC221	*87-011-219-019	CAP,TRIMMER 10P(Z)
TC601	*87-011-221-019	CAP,TRIMMER 30P
X601	*87-030-163-019	CRYSTAL RESONATOR 7.2MHZ(NDK)
		=== FRONT CIRCUIT BOARD SECTION ===
C1	*87-018-134-019	CAP,CERA SS 0.01
C2	*87-018-134-019	CAP,CERA SS 0.01
C3	*87-018-134-019	CAP,CERA SS 0.01
C4	*87-018-134-019	CAP,CERA SS 0.01
C5	*87-010-374-019	CAP,ELECT 47-10V
C6	*87-010-402-019	CAP,ELECT 2.2-50V SME
C7	*87-010-408-019	CAP,ELECT 47-50VX
C8	*87-010-252-019	CAP,ELECT 1000-6.3
C9	*87-018-134-019	CAP,CERA SS 0.01
C10	*87-018-134-019	CAP,CERA SS 0.01
C11	*87-010-408-019	CAP,ELECT 47-50VX
C12	*87-018-134-019	CAP,CERA SS 0.01(E,K,Z)
CF1	*87-008-394-019	FILTER,CERAMIC CST4.19MGW
FL1	81-690-620-010	FL,9BT-44GK(FREQ/TIMER DISPLAY)
L1	*87-003-102-019	COIL,CHOKE 10UH(E,K,Z)
L2	*87-003-102-019	COIL,CHOKE 10UH(U)
L3	*87-003-102-019	COIL,CHOKE 10UH
SW1	87-036-142-010	TACT SW(PRESET1)
SW2	87-036-142-010	TACT SW(PRESET2)
SW3	87-036-142-010	TACT SW(PRESET3)
SW4	87-036-142-010	TACT SW(PRESET4)
SW5	87-036-142-010	TACT SW(PRESET5)
SW6	87-036-142-010	TACT SW(PRESET6)
SW7	87-036-142-010	TACT SW(PRESET7)
SW8	87-036-142-010	TACT SW(PRESET8)
SW9	87-036-142-010	TACT SW(PRESET9)
SW10	87-036-142-010	TACT SW(PRESET10)
SW11	87-036-142-010	TACT SW(BAND)

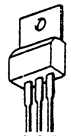
REF.NO.	PART NO.	DESCRIPTION
SW12	87-036-142-010	TACT SW(TUNING/TIMER UP)
SW13	87-036-142-010	TACT SW(TUNING/TIMER DOWN)
SW14	87-036-142-010	TACT SW(SET/MEMORY)
SW15	87-036-142-010	TACT SW(FM MODE)
SW16	87-036-142-010	TACT SW(DISPLAY)
SW17	87-036-142-010	TACT SW(SLEEP)
SW18	87-036-142-010	TACT SW(TIMER STANDBY)
SW19	87-036-142-010	TACT SW(POWER)

MX – D9,D909 , FX – W9,W909,W808,
TX – D9, GE – D9

2SA1048



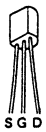
3SK73



2SD1761

2SA952
2SA1015
2SA1296
2SC945
2SC1815
2SC1923
2SC2001
2SC2878
ESA1266

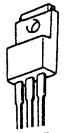
DTA114
DTA143
DTA144
DTC114
DTC123
DTC124
DTC144



2SK246
2SK373

2SK161
2SK241

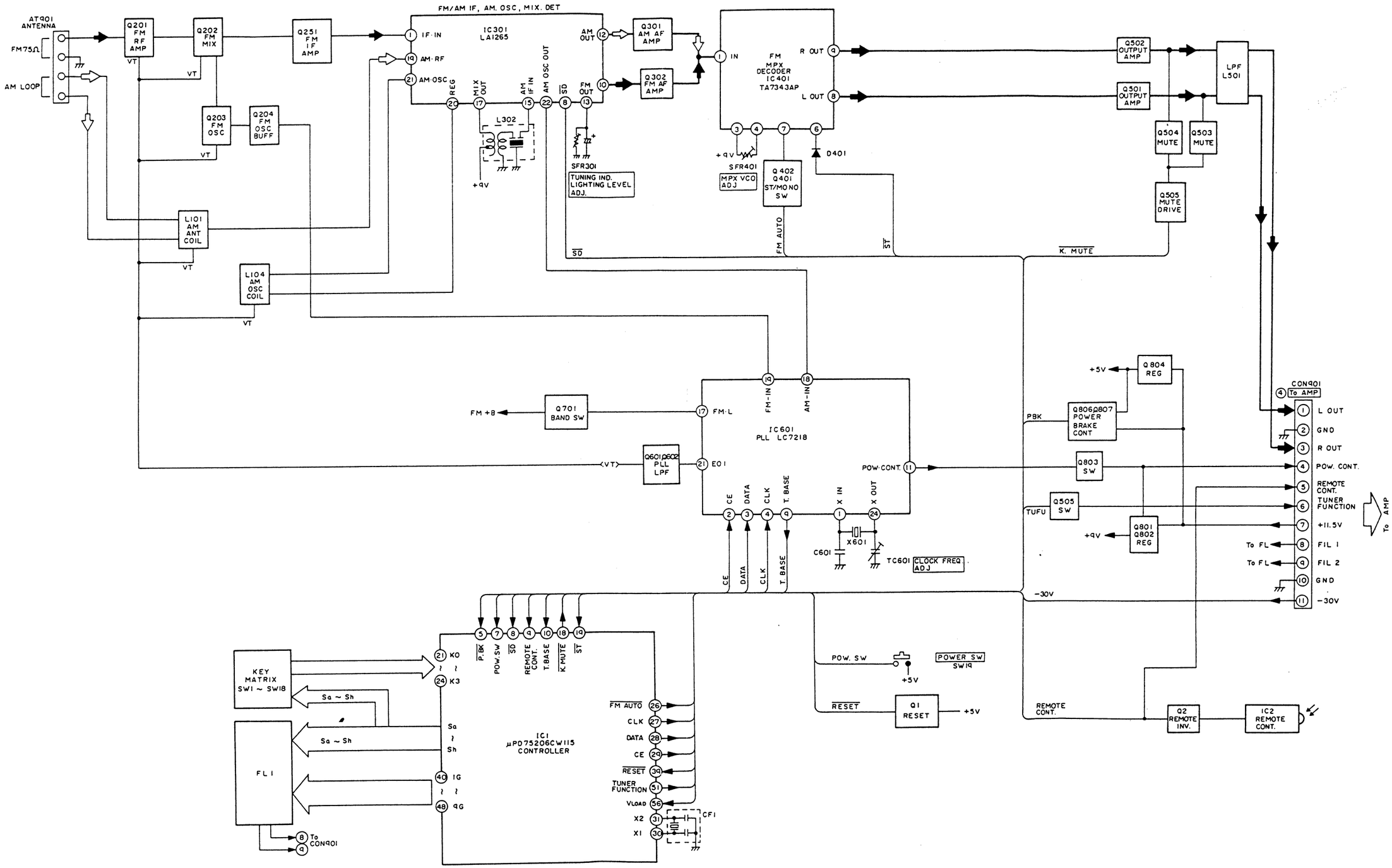
2SC1383



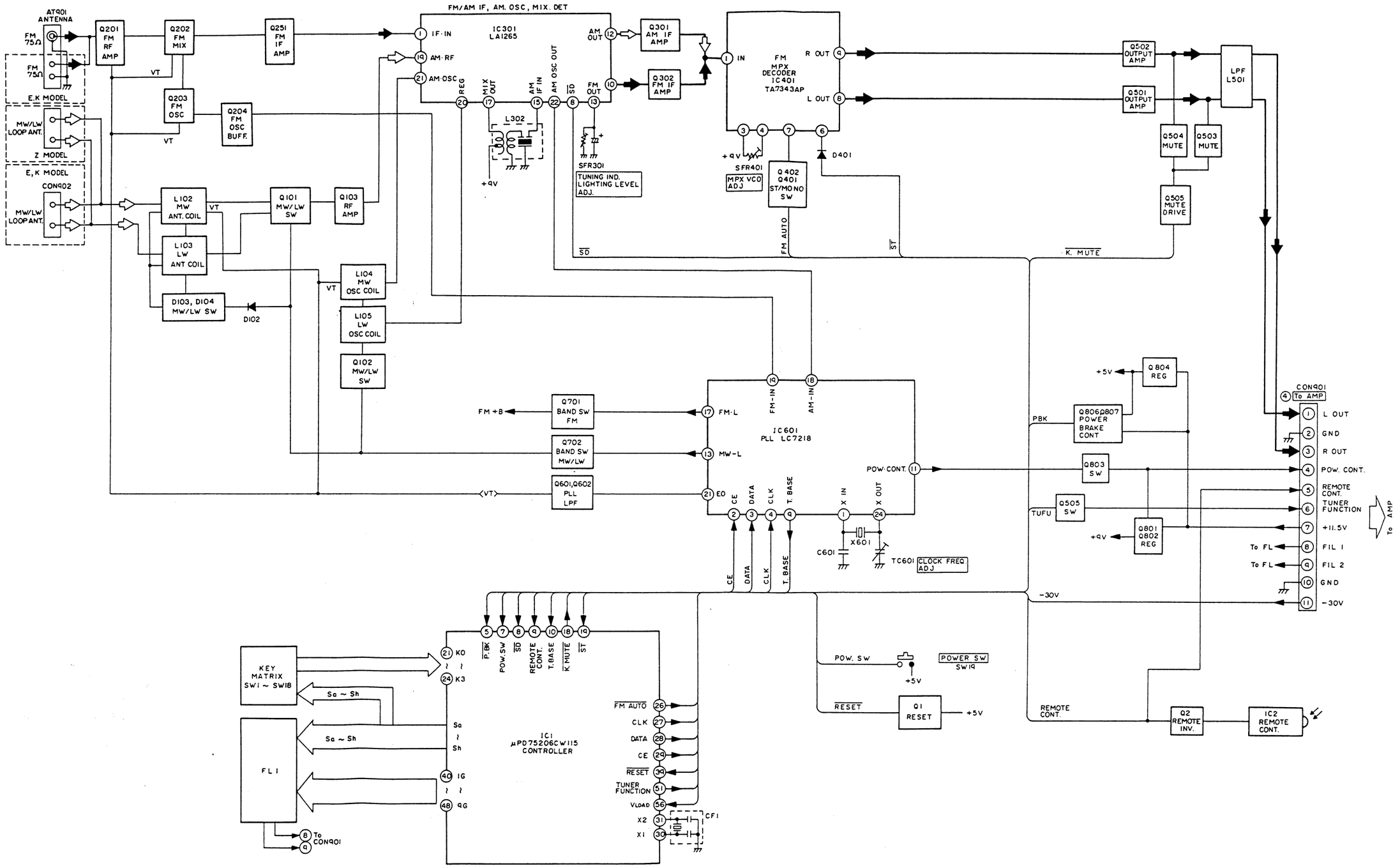
2SB1015
2SB1375

2SC2603

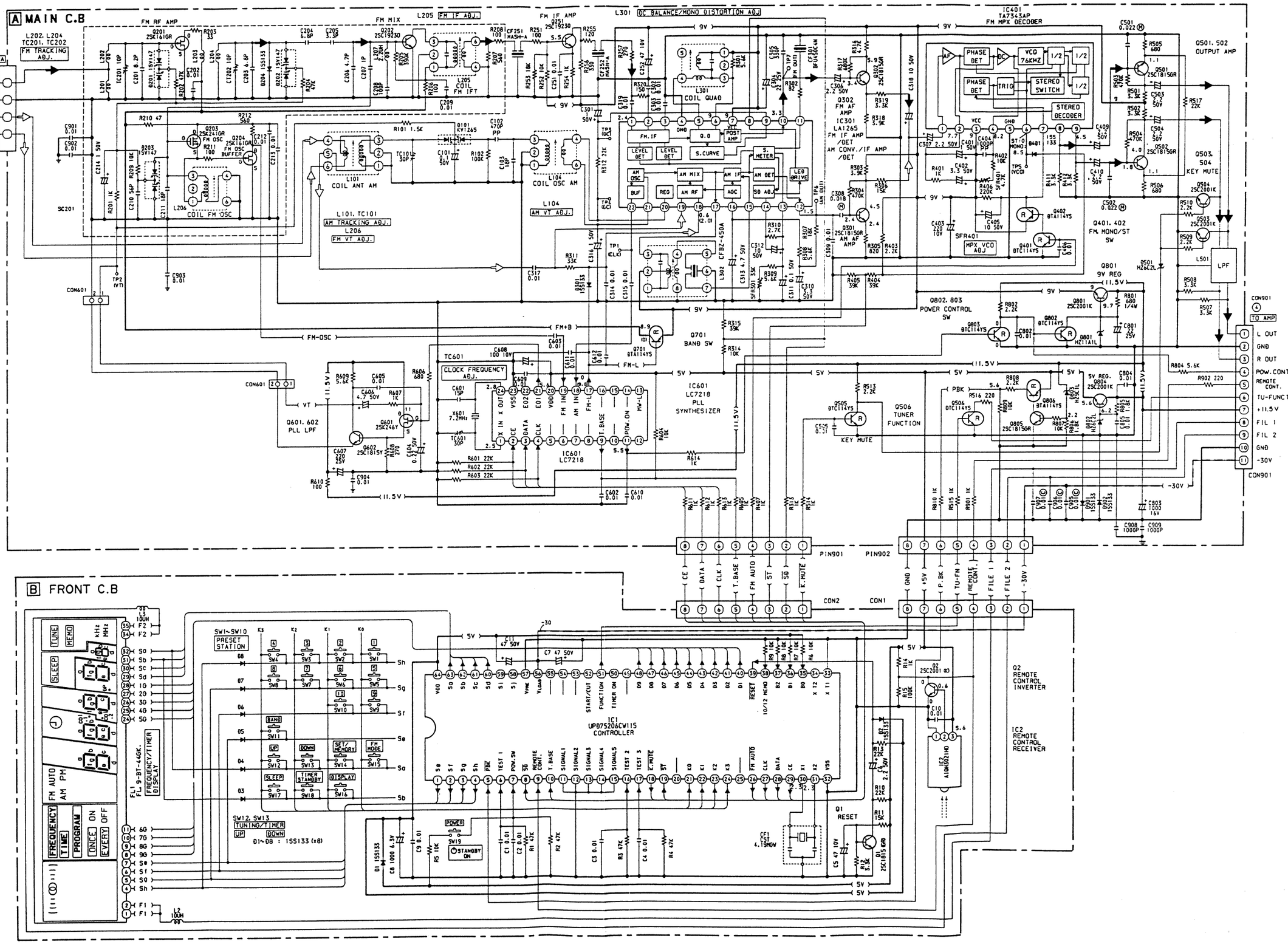
BLOCK DIAGRAM – 1 (TX – D9FYU)

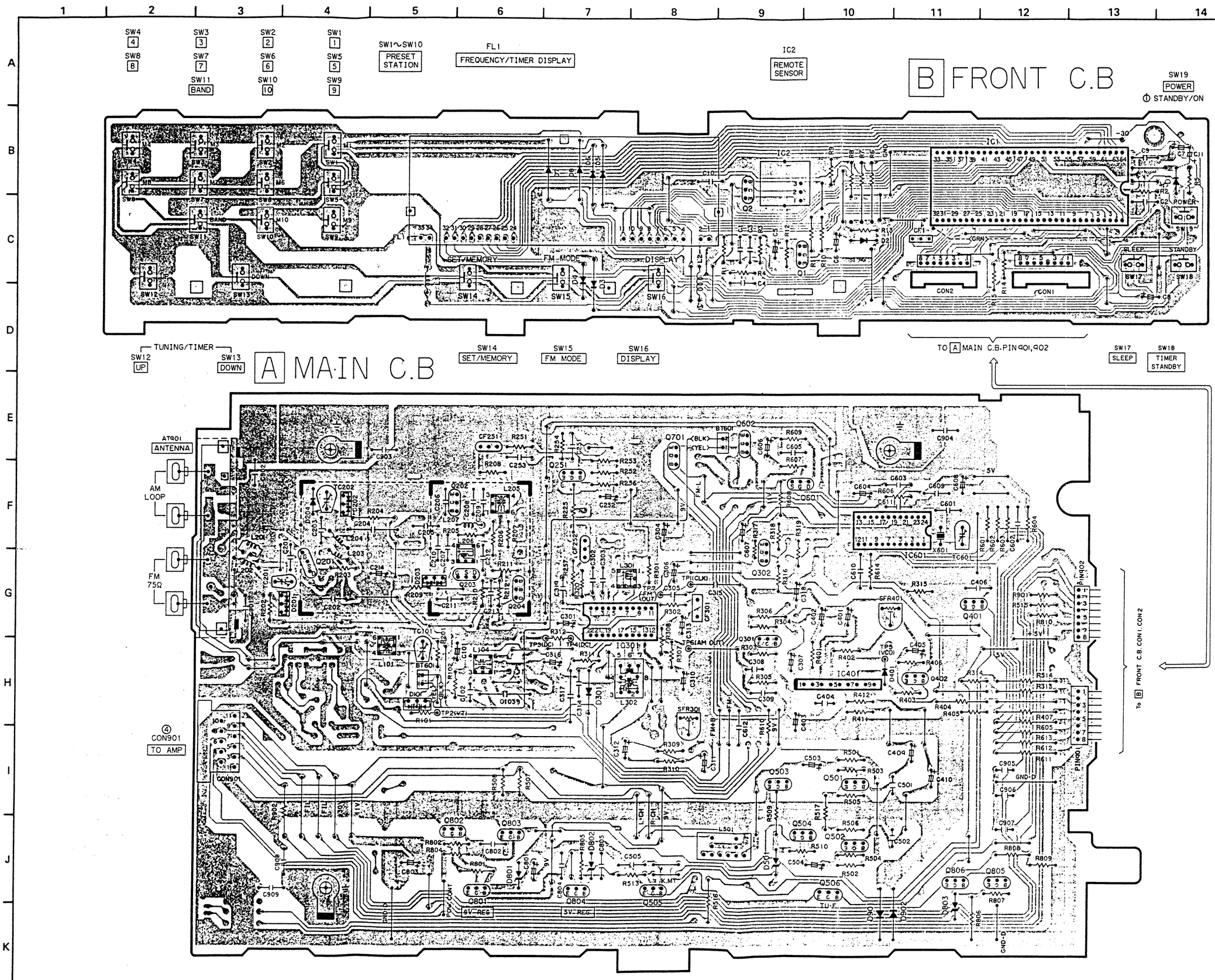


BLOCK DIAGRAM – 2 (1X – D9LY,LYK,LYZ)

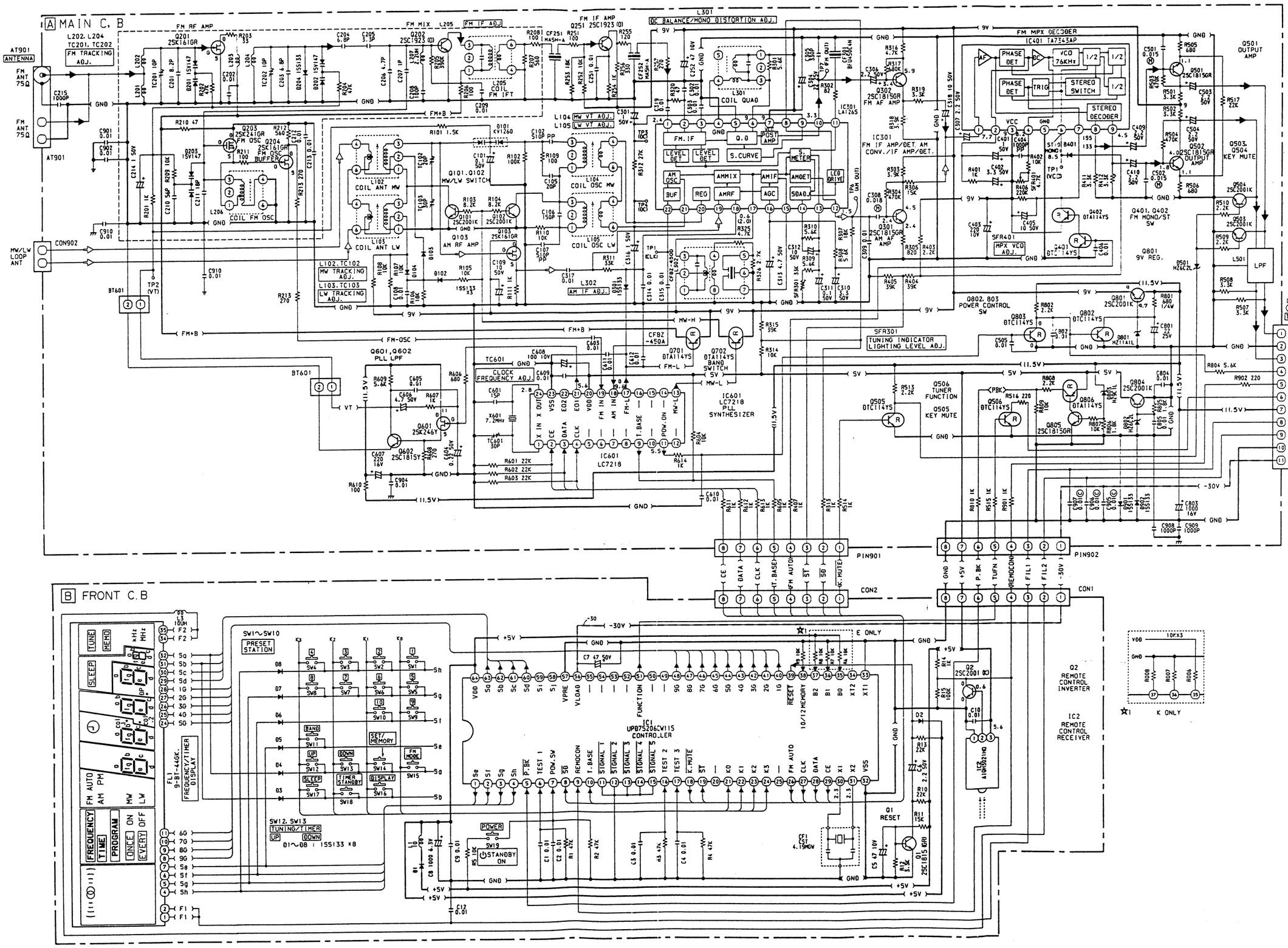


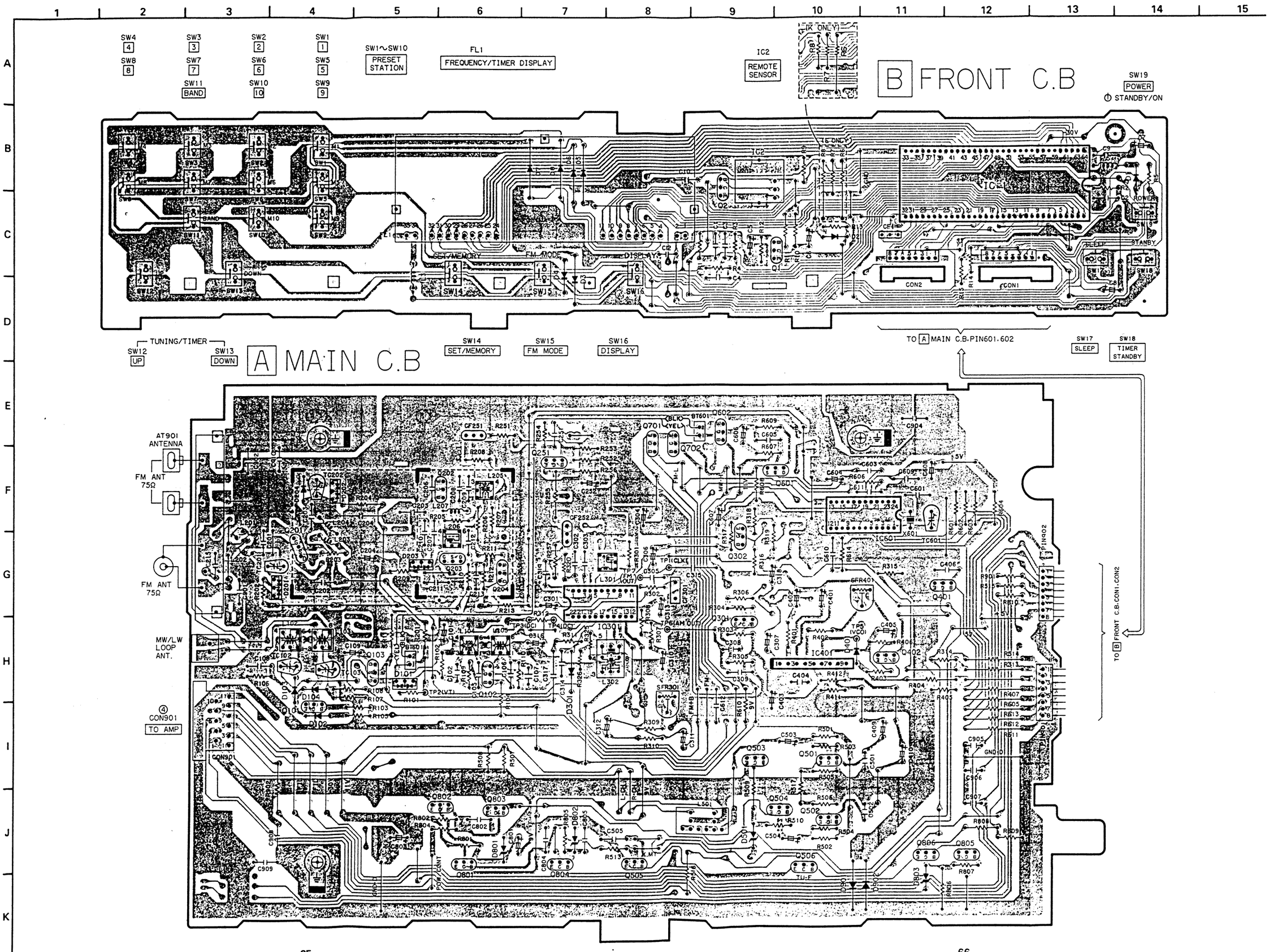
SCHEMATIC DIAGRAM – 1 (TX – D9FYU)



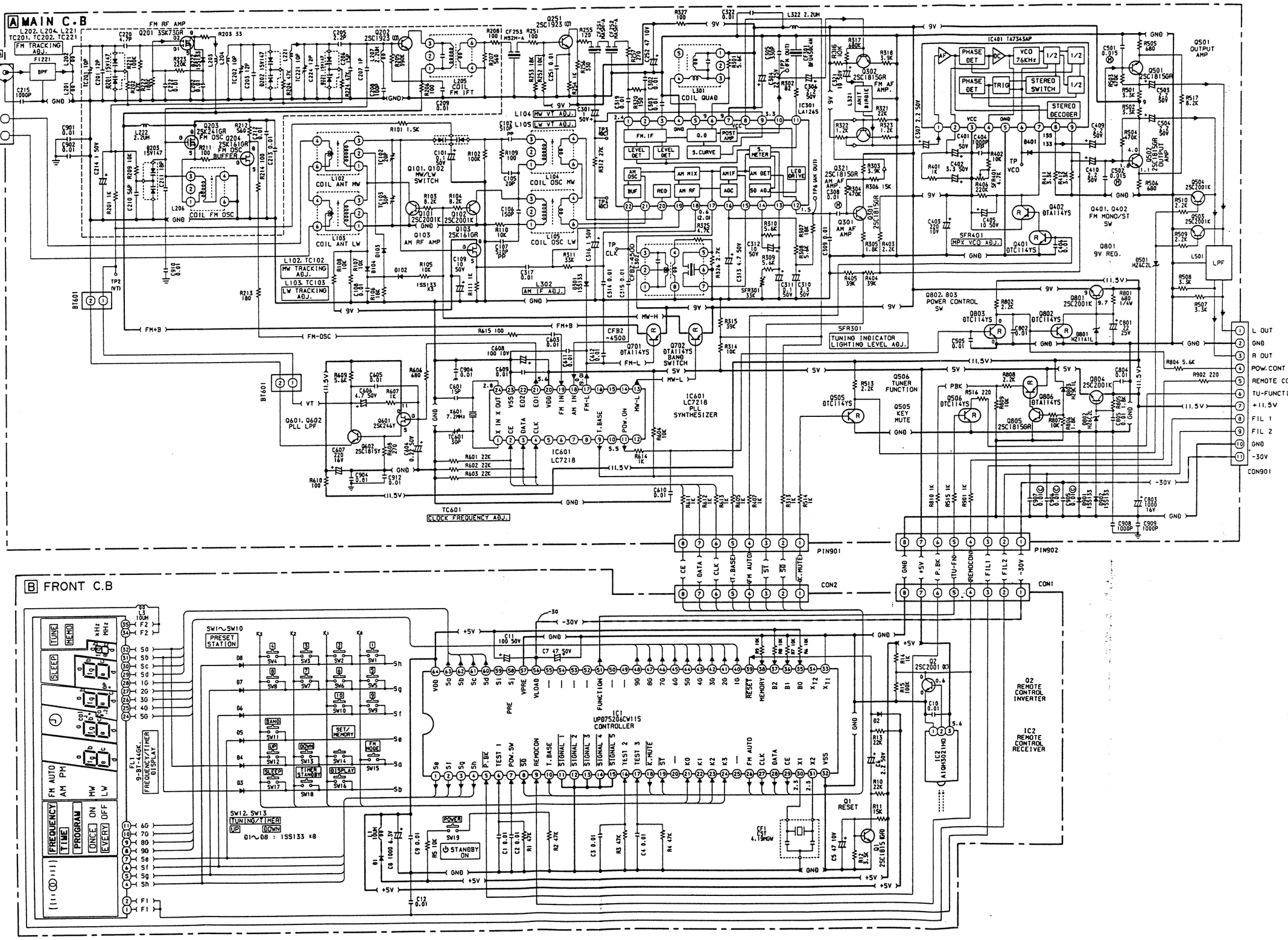

SW4 4
SW3 3
SW2 2
SW1 1
SW8 8
SW7 7
SW6 6
SW5 5
SW11 BAND
SW10 10
SW9 9
SW1~SW10 PRESET STATION
FL1 FREQUENCY/TIMER DISPLAY
IC2 REMOTE SENSOR
B FRONT C.B
SW19 POWER ⏻ STANDBY/ON
SET/MEMORY
FM-MODE
DISPLAY
SW14
SW15
SW16
SW12 UP
SW13 DOWN
TUNING/TIMER
A MAIN C.B
TO A MAIN C.B. PIN 901, 902
SW17 SLEEP
SW18 TIMER STANDBY
ANTENNA
AM LOOP
FM 75Ω
④ CON901 TO AMP
To B FRONT C.B. CON1, CON2
9V-REG
5V-REG
TU-F.

SCHEMATIC DIAGRAM – 2 (TX – D9LY,LYK)




SW4 4
SW3 3
SW2 2
SW1 1
SW8 8
SW7 7
SW6 6
SW5 5
SW11 BAND
SW10 10
SW9 9
SW1~SW10 PRESET STATION
FL1 FREQUENCY/TIMER DISPLAY
IC2 REMOTE SENSOR
(TX ONLY)
B FRONT C.B
SW19 POWER
STANDBY/ON
SET/MEMORY
FM MODE
DISPLAY
SW14
SW15
SW16
TUNING/TIMER
SW12 UP
SW13 DOWN
A MAIN C.B
TO A MAIN C.B.PIN601.602
SW17 SLEEP
SW18 TIMER STANDBY
AT901 ANTENNA
FM ANT 75Ω
FM ANT 75Ω
MW/LW LOOP ANT.
④ CON901 TO AMP
TO B FRONT C.B.CON1.CON2

SCHEMATIC DIAGRAM – 3 (TX – D9LYZ)



SW4 [4] SW8 [8] SW3 [3] SW7 [7] SW11 [BAND] SW2 [2] SW6 [6] SW10 [10] SW1 [1] SW5 [5] SW9 [9]

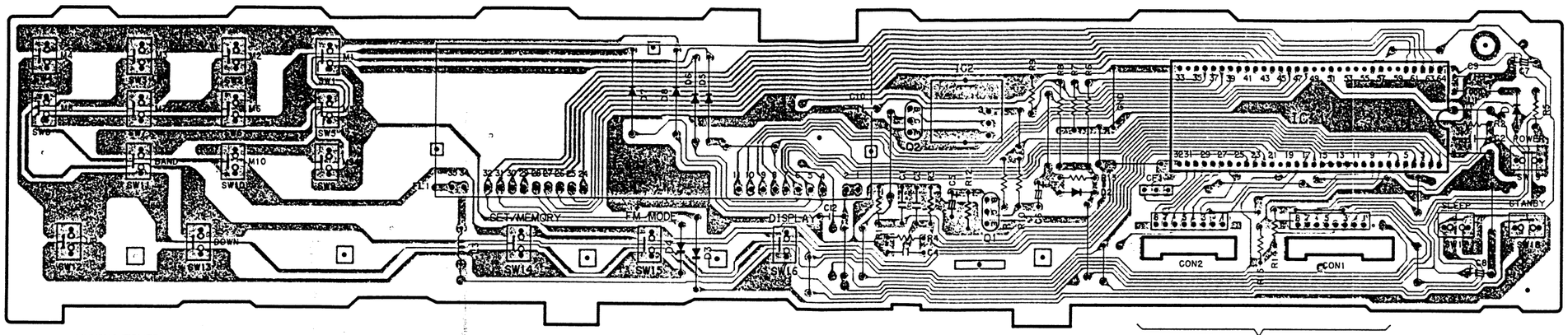
SW1~SW10 [PRESET STATION]

FL1 [FREQUENCY/TIMER DISPLAY]

IC2 [REMOTE SENSOR]

B FRONT C.B

SW19 [POWER] ⏻ STANDBY/ON



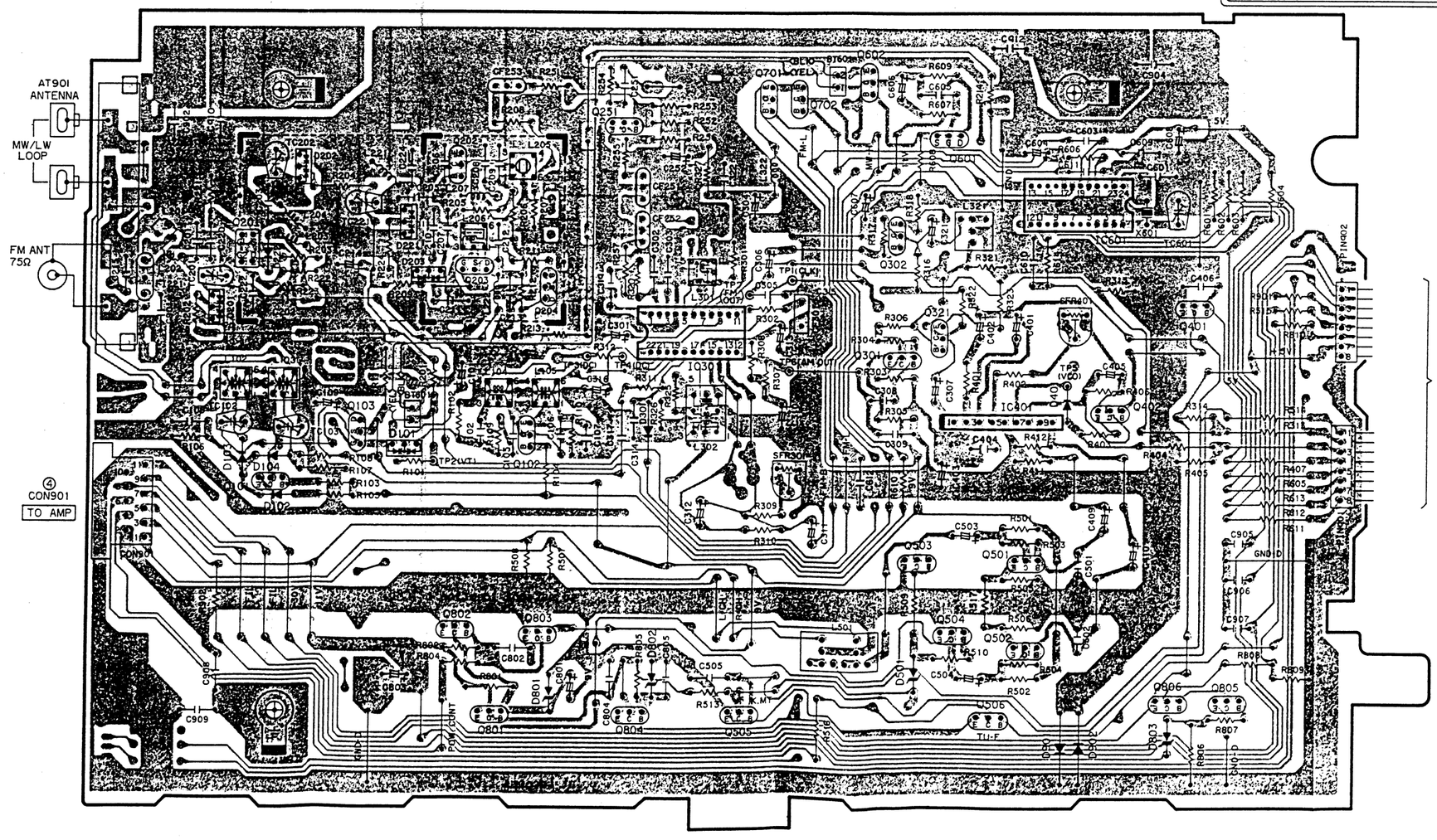
TUNING/TIMER
SW12 [UP] SW13 [DOWN]

SW14 [SET/MEMORY] SW15 [FM MODE] SW16 [DISPLAY]

TO [A] MAIN C.B.PIN601.602

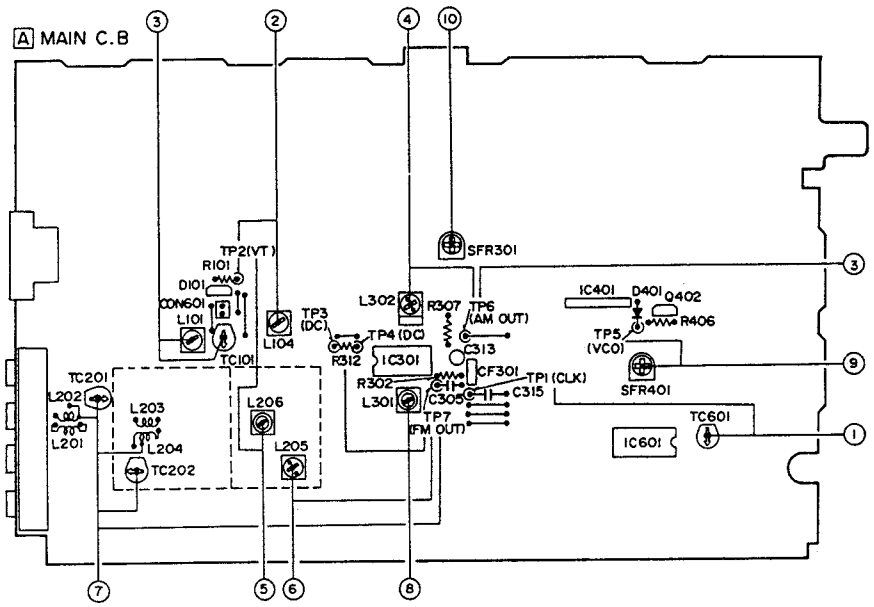
SW17 [SLEEP] SW18 [TIMER STANDBY]

A MAIN C.B



ADJUSTMENT (TX – D9FYU,LY,LYK,LYZ)

TX – D9FYU



(TUNER SECTION)

1. Clock Frequency Adjustment
   Settings : · Test point : TP1
   · Adjustment location : TC601
   Method : Set to AM, 1700kHz and adjust so that the test point becomes 2150kHz±0.01kHz.

2. AM VT Adjustment
   Settings : · Test point : TP2
   · Adjustment location : L104
   Method : Set to AM, 530kHz and adjust so that the test point becomes 1.1V±0.05V.

3. AM Tracking Adjustment
   Settings : · Test point : TP6
   L101 · · · · · · · · · · · · · · · · 600kHz
   TC101 · · · · · · · · · · · · · · · · · 1400kHz
   Method : Adjust so that the output level at test point becomes maximum.

4. AM IF Adjustment
   Settings : · Test point : TP6
   L302 · · · · · · · · · · · · · · · · · 450kHz

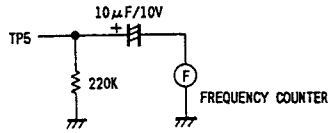
5. FM VT Adjustment
   Settings : · Test point : TP2
   · Adjustment location : L206
   Method : Set to FM, 87.5MHz and adjust L206 so that TP2 becomes 3.0V±0.05V.

6. FM IF Adjustment
   Settings : · Test point : TP7
   L205 · · · · · · · · · · · · · · · · · 10.7MHz

7. FM Tracking Adjustment
   Settings : · Test point : TP7
   L202, L204 · · · · · · · · · · · · · · 87.5MHz
   TC201, TC202 · · · · · · · · · · · · · 108MHz
   Method : Adjust so that the output level at test point becomes maximum.

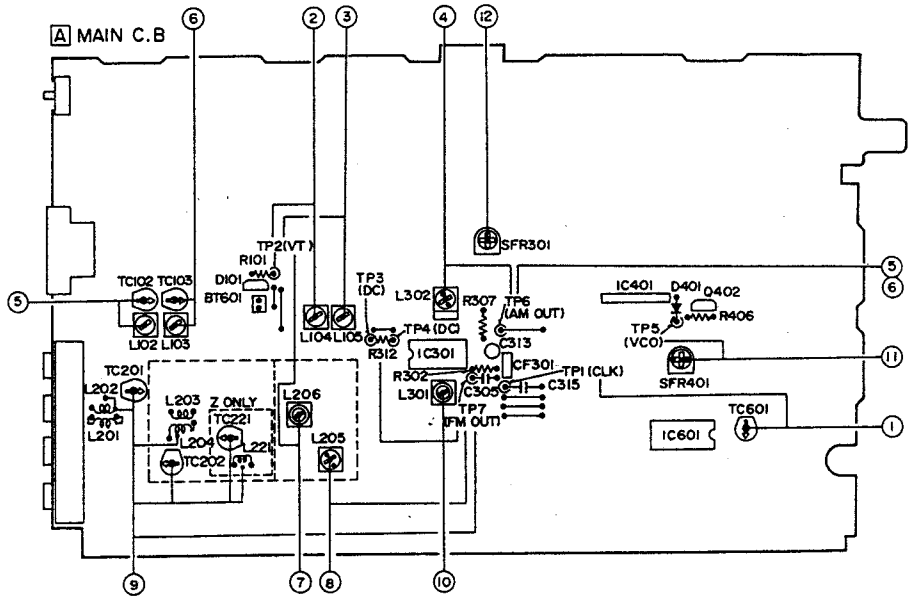
8. DC Balance/MONO Distortion Adjustment
   Settings : · Test point : TP3, TP4 (DC balance)
   TP7 (Distortion)
   · Adjustment location : L301
   Method : Set to FM, 98.0MHz and adjust L301 so that TP3 and TP4 output becomes 0V±0.02V. Next, adjust L301 so that the distortion becomes minimum (less than 0.8%).

9. MPX VCO Adjustment
   Settings : · Test point : TP5
   · MODE SW : STEREO
   · Adjustment location : SFR401
   Method : Connect a capacitor and a resistor as below. Set to FM, 98.0MHz and adjust so that the frequency at test point becomes 38kHz±0.05 kHz.



10. Tuning Indicator Lighting Level Adjustment
    Settings : · Adjustment location : SFR301
    Method : Apply an FM 98.0MHz, 18dB signal and adjust so that the "TUNE" indicator lights. Lower the input level by 1dB and check that the "TUNE" indicator goes out.

TX – D9LY,LYK,LYZ



(TUNER SECTION)

1. Clock Frequency Adjustment
   Settings : · Test point : TP1
   · Adjustment location : TC601
   Method : Set to AM 1611kHz and adjust so that the test point becomes 2061kHz±0.01kHz.

2. MW VT Adjustment
   Settings : · Test point : TP2
   · Adjustment location : L104
   Method : Set to MW, 522kHz and adjust so that the test point becomes 1.0V±0.05V.

3. LW VT Adjustment
   Settings : · Test point : TP2
   · Adjustment location : L105
   Method : Set to LW, 144kHz and adjust so that the test point becomes 1.5V±0.05V.

4. AM IF Adjustment
   Settings : · Test point : TP6
   L302 · · · · · · · · · · · · · · · · · 450kHz

5. MW Tracking Adjustment

Settings : · Test point : TP6

L102 · · · · · · · · · · · · · · · · · · 603kHz

TC102 · · · · · · · · · · · · · · · · · · 1404kHz

Method : Adjust so that the output level at test point becomes maximum.

6. LW Tracking Adjustment

Settings : · Test point : TP6

L103 · · · · · · · · · · · · · · · · · · 144kHz

TC103 · · · · · · · · · · · · · · · · · · 290kHz

Method : Adjust so that the output level at test point becomes maximum.

7. FM VT Adjustment

Settings : · Test point : TP2

· Adjustment location : L206

Method : Set to FM, 87.5MHz and adjust L206 so that TP2 becomes 3.0V±0.05V.

8. FM IF Adjustment

Settings : · Test point : TP7

L205 · · · · · · · · · · · · · · · · · · 10.7MHz

9. FM Tracking Adjustment

Settings : · Test point : TP7

L202, L204, (L221) · · · · · · · · · · 87.5MHz

TC201, TC202, (TC221) · · · · · · · · · · 108MHz

( ) · · · · · · · Z model only

Method : Adjust so that the output level at test point becomes maximum.

10. DC Balance/MONO Distortion Adjustment

Settings : · Test point : TP3, TP4 (DC balance)

TP7 (Distortion)

· Adjustment location : L301

Method : Set to FM, 98.0MHz and adjust L301 so that TP3 and TP4 output becomes 0V±0.02V. Next, adjust L301 so that the distortion becomes minimum (less than 0.8%).

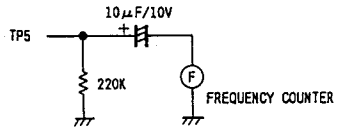
11. MPX VCO Adjustment

Settings : · Test point : TP5

· MODE SW : STEREO

· Adjustment location : SFR401

Method : Connect a capacitor and a resistor as below. Set to FM, 98.0MHz and adjust so that the frequency at test point becomes 38kHz±0.05 kHz.



12. Tuning Indicator Lighting Level Adjustment

Settings : · Adjustment location : SFR301

Method : Apply an FM 98.0MHz, 18dB signal and adjust so that the "TUNE" indicator lights. Lower the input level by 1dB and check that the "TUNE" indicator goes out.

PRACTICAL SERVICE FIGURE (TX – D9F,L)

〈FM SECTION〉

IHF Sensitivity : U,E,K Models
(THD 3%) 2±4dB (at 87.5, 98.0, 108.0MHz)
(S/N 26dB, Z model
Use DIN FILTER) 4±4dB (at 87.5, 98.0, 108.0MHz)

S/N 50dB Quieting Sensitivity :
U,E,K Models
28±6dB (at 87.5, 98.0, 108.0MHz)

S/N 46dB Quieting Sensitivity :
Z Model
28±6dB (at 87.5, 98.0, 108.0MHz)

Signal to Noise Ratio: (MONO.)
More thn 68dB (at 98.0MHz)
(STEREO)
U,E,K Models More than 62dB
Z Model More than 60dB

Total Harmonic Distortion :(MONO.)
Less than 0.8% (at 98.0MHz)
(STEREO)
Less than 1.5% (at 98.0MHz)

Stereo Separation : More than 25dB

Intermediate Frequency : 10.7MHz

〈AM(MW) SECTION〉

Sensitivity : 57±3dB
(at 620kHz(U), 603kHz(E,K,Z))
55±3dB
(at 1000kHz(U), 999kHz(E,K,Z))
52±3dB
(at 1410kHz(U), 1404kHz(E,K,Z))

Total Harmonic Distortion :
Less than 2.0%
(at 1000kHz(U), 999kHz(E,K,Z))

Intermediate Frequency : 450kHz

〈LW SECTION〉 (E,K,Z Models)

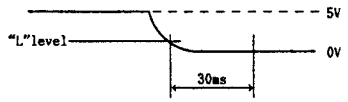
Sensitivity : 64±5dB (at 162, 198, 290kHz)

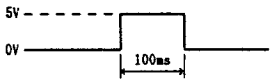
Total Harmonic Distortion :
Less tahn 1.5% (at 198kHz)

Intermediate Frequency : 450kHz

IC DESCRIPTION (TX – D9F,L)

IC, μ PD75206 – CW115

Pin No.	Pin Name	I/O	Description
1 〜 4	Se 〜 Sh	O	Segment signal outputs and key scan signal outputs. Active "H".
5	$\overline{PBK}$ (Power Brake)	I	Input to detect a power failure. When this pin continues to be "L" for 30ms at more, a power failure is detected (the unit enters the power backup state). 
6 16 17	TEST 1 TEST 2 TEST 3	I	Test mode setting inputs.
7	POW SW	I/O	Power control input. The power is turned on and off alternately (the rise is detected) every time the power switch is pressed. When the power is turned on, IC13 pin 11 POW goes "H".
8	$\overline{SD}$	I	Input to stop auto scanning. Active "L". • This input is not accepted during power off. • This input lights "TUNE". • SD is detected every 5ms during auto scanning, and when 4 "L" pulses are counted, auto scanning is stopped. • SD is not detected during manual tuning.
9	REMOCON	I	Remote control serial data input. Active "H" (the rise is detected)
10	T. BASE	I	Receives 8Hz from the PLL (LC7218) as a time base clock signal.
11 〜 15	$\overline{SIGNAL\ 1}$ 〜 $\overline{SIGNAL\ 5}$	–	Unused.
18	$\overline{K.MUTE}$	O	Outputs a muting signal when any key is operated. Active "L".
19	$\overline{ST}$	I	Input to light the STEREO((((●)))) indicator. • This input is not accepted when power is off.
20	——	–	Unused.
25	——	–	Unused.
21 〜 24	K0 〜 K3	I	Auto scanning inputs.
26	$\overline{FM\ AUTO}$	O	Outputs a signal depending on the mode selected by the MODE key during FM reception. Active "L" when the AUTO indicator lights. • IF the AUTO indicator changes when a frequency is selected in timer programming, the output is the channel being received.
27 28 29	CLK DATA CE	O	Output ports to transfer serial data to the IC, LC7218. Active "H".
30 31	X_1 X_2	–	A ceramic oscillator which generates a main system clock signal (4.19MHz).
32	Vss	–	Ground.
33	XT_1	–	Unused (connected to ground).
34	XT_2	–	Unused.

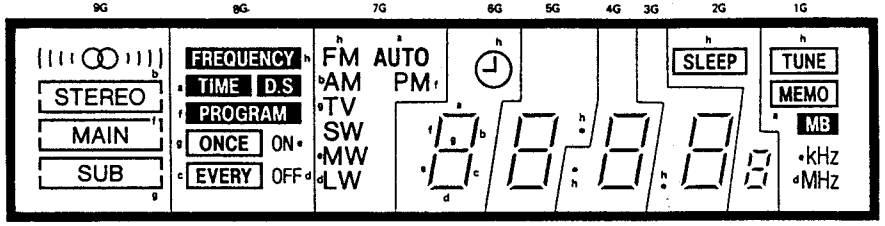
Pin No.	Pin Name	I/O	Description
35 36 37	B_0 B_1 B_2	I	Inputs to select the frequency range, etc. accordng to the destination to which the unit is to be shipped, using 3 bits. R6 B_0 R7 B_1 R8 B_2 Destination / Pin: H: H H ☆; U: L L H; E,Z: H L H; K: H L L H: HIGH (pull-up) L: LOW (pull-down) *: Changed by a switch
38	10/12 MEMO	I	Input to select the number of preset memories 10 or 12. "L" input assigns 10 memories and "H" input assigns 12 memories.
39	$\overline{RESET}$	I	System reset input.
40 〜 48	D_1 〜 D_9	O	Digit signal outputs. Active "H".
49	——	–	Unused.
50	TIMER ON	–	Unused.
51	FUNCTION	O	Outputs a function signal when the band key, preset key (recall) or up/down key (frequency) is pressed or during timer on. Active "H". 
52	START/CUT	–	Unused.
53	——	–	Unused.
54	——	–	Unused.
55	——	–	Unused.
56	V_{LOAD}	I	Power supply pin of the output buffer in the FL display.
57	V_{PRE}	I	For connection of pull-down resistor of the FL display.
58 59 60 61 62 63	Sj Si Sd Sc Sb Sa	O	Segment signal outputs and key scan signal outputs. Active "H".
64	V_{DD}	–	Power supply pin. 5V±10%

IC, LC7218

PIN No.	Pin Name	I/O	Description
1 24	X IN X OUT	–	Clock oscillator connection pins. A 7.2MHz crystal oscillator is connected.
2 3 4	CE DATA CLK	I	When a key is operated, signals are transferred from the CPU. Active "H".
5 〜 8	——	–	Unused.
9	T. BASE	O	Outputs an 8Hz signal. Transfers it to the CPU as a time base clock signal.
10	——	–	Unused.
11	POW ON	O	Power control output. Outputs "H" during power on.
12	——	–	Unused.
13	MW-L	O	Outputs "L" when an MW(AM) broadcast is received.
14	——	–	Unused.
15 16	——	–	Unused.
17	FM-L	O	Outputs "L" when an FM broadcast is received.

Pin No.	Pin Name	I/O	Description
18	AM IN	I	AM local oscillation input.
19	FM IN	I	FM local oscillation input.
20	V_{DD}	–	Power supply pin. 5V±10%
21	E_{o1}	O	PLL error output.
22	E_{o2}	–	Unused.
23	V_{SS}	–	Ground pin.

FL DISPLAY 9 – BT – 44GK (TX – D9F,L)

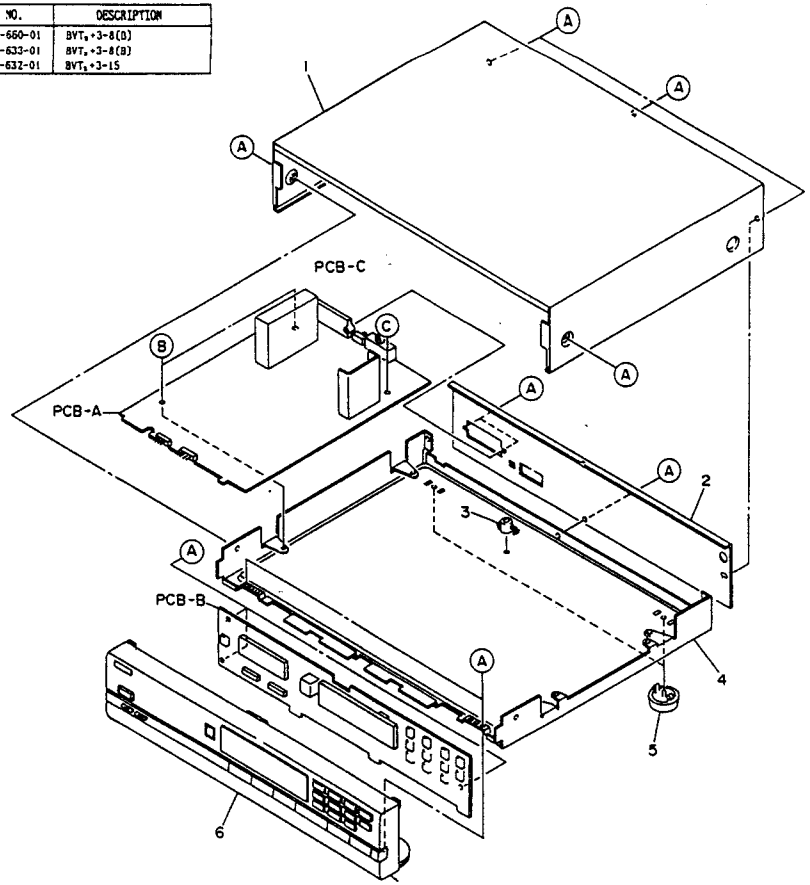


ANODE CONNECTION TABLE (TX – D9F,L)

S \ G	9G	8G	7G	6G	5G	4G	3G	2G	1G
a	–	TIME	AUTO	a	a	a	a	a	MEMO
b	–	–	AM	b	b	b	b	b	–
c	–	EVERY	–	c	c	c	c	c	–
d	–	OFF	LW	d	d	d	d	d	MHz
e	–	ON	MW	e	e	e	e	e	kHz
f	–	PROGRAM	PM	f	f	f	f	f	–
g	–	ONCE	–	g	g	g	g	g	–
h	((CD))	FREQUENCY	FM	(STAND BY)	Colon(5)	Colon(6)	Dot	SLEEP	TUNE

EXPLODED VIEW – 1 (TX – D9F,L)

REF.NO.	PART NO.	DESCRIPTION
A	87-067-660-01	BVT$_0$+3-8(B)
B	87-067-633-01	BVT$_0$+3-8(B)
C	87-067-632-01	BVT$_0$+3-15



MECHANICAL PARTS LIST (TX – D9F,L)

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-1	*81-690-006-110	CABINET STEEL	*	1
	1-2	*81-690-016-019	PANEL REAR(D9FY)	*	1
	1-2	*81-690-018-019	PANEL REAR(D9FYU)	*	1
	1-2	*81-690-031-119	PANEL REAR(D9FYJ)	*	1
	1-2	*81-690-019-019	PANEL REAR(D9LY)	*	1
	1-2	*81-690-032-019	PANEL REAR(D9LYK)	*	1
	1-2	*81-690-021-019	PANEL REAR(D9LYZ)	*	1
	1-3	*81-664-202-010	HOLDER,PCB		1
	1-4	---	CHASSIS AMP		1
	1-5	*81-669-025-010	FOOT H11		2
	1-6	*09-047-460-010	CABINET FRONT ASSY(EXCEPT D9YU)	*	1
	1-6	*09-047-484-010	CABINET FRONT ASSY(D9YU)	*	1

MODEL NO.

GE – D9

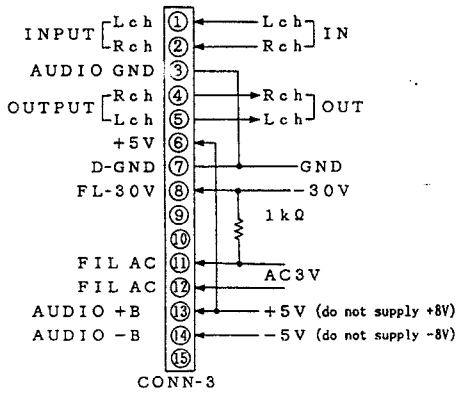
CAUTION WHEN SERVICING (GE – D9)

Cautions when servicing the GE-D9

The GE-D9 does not have a power circuit. Through a 15-pin flat cable, power is supplied to the GE-D9 and also signals are input and output to/from it. When servicing the GE-D9, connect it to the MX-D9 or MX-D909 amplifier. If the amplifier is not available, follow the procedure below.

(When servicing the unassembled MX-D9, D909)

1 Supply the following voltages to each terminal from an external power supply.



Caution: Supply ±5V and AC 3V simultaneously; otherwise, the controller IC may not be reset correctly.

Fig-1

2 When using a multi power unit (LPS-9088)

○Set the multi power unit as shown in Figure-3 and connect the multi conversion harness to J1 to supply power.

※If the FL display of the GE-D9 shows erroneous indications and the GE-D9 cannot be operated, perform the following operations. (Figure-2)

1 Turn off the power switch of the multi power unit.
2 Unsolder jumper J34 from the front circuit board in the graphic equalizer.
3 Connect a tester or oscilloscope to pin 19 (RESET) of controller IC1. (DC range)
4 Press the power switch of the multi power unit several times so that the DC voltage at pin 19 of IC1 is 4V or more. (If it is less than 4V, IC1 is not fully reset and will not operate.)

Cautions:

1) After servicing, be sure to re-solder jumper J34.
2) If the FL display is dim, unsolder jumper J1 or J73 to switch off one FL display; the other display will become bright.
3) The reset circuit operation is required and the FL display is dim because of the voltage drop occurs across terminals H and I (AC voltage) of the multi power unit.

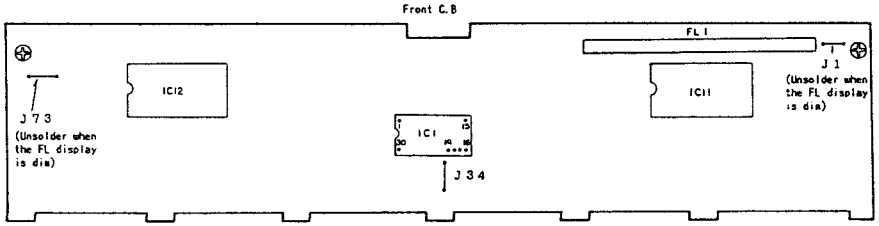
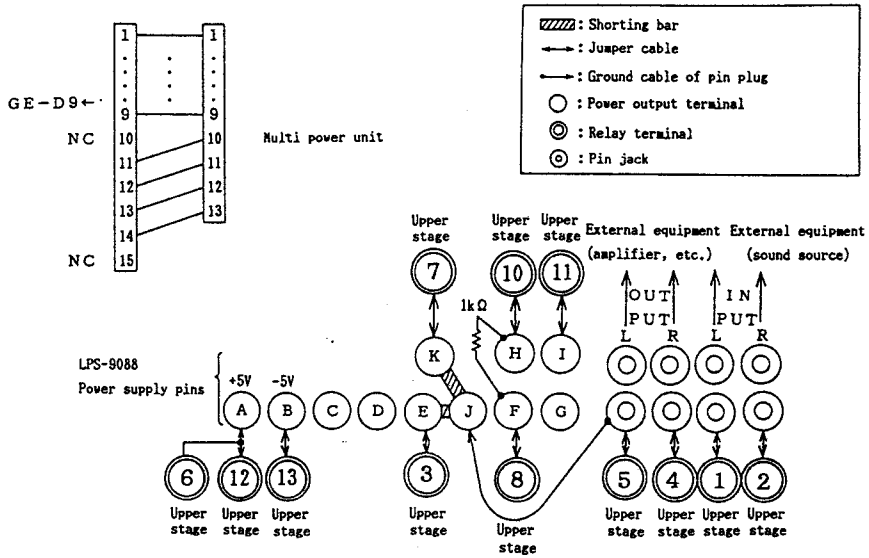


Fig-2

Multi power unit (LPS-9088) connection diagram

・Connect the multi conversion harness of the B connector to J1.

Connection diagram of conversion harness

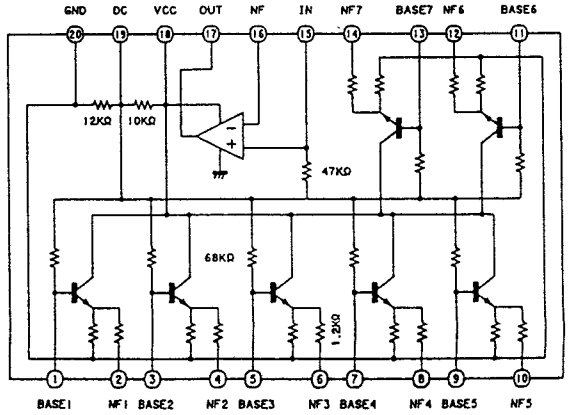


The 1kΩ resistor is provided for the bias voltage of the FL display.

Fig-3

IC, BLOCK DIAGRAM (GE – D9)

IC, LA3607



ELECTRICAL MAIN PARTS LIST (GE – D9)

REF.NO.	PART NO.	DESCRIPTION
=== IC ===		
	87-001-530-010	IC,LA3607
	81-691-621-010	IC,LC6543H-3973
	87-001-528-010	IC,LC7522
	87-001-529-010	IC,LC7565
	87-001-131-010	IC,NJM2058BD
	87-001-133-010	IC,NJU4052BD
=== TRANSISTOR ===		
	89-318-155-019	TRANSISTOR,2SC1815 GR
	89-320-011-019	TRANSISTOR,2SC2001K
	87-026-269-019	TRANSISTOR,DTA114ES
	87-026-218-019	TRANSISTOR,DTC144ES
=== DIODE ===		
	87-020-691-019	DIODE,1SS132
	87-027-555-010	DIODE,ZENER HZ5C2
	87-027-606-010	DIODE,ZENER HZ7C2L
=== MAIN CIRCUIT BOARD SECTION ===		
C31	*87-010-405-019	CAP,ELECT 10-50SME
C32	*87-010-405-019	CAP,ELECT 10-50SME
C33	*87-010-402-019	CAP,ELECT 2.2-50SME
C34	*87-010-402-019	CAP,ELECT 2.2-50SME
C40	*87-010-260-019	CAP,ELECT 47-25V SME
C41	*87-010-260-019	CAP,ELECT 47-25V SME
C51	*87-010-545-019	CAP,ELECT 0.22-50 SME
C52	*87-010-545-019	CAP,ELECT 0.22-50 SME
C53	*87-010-545-019	CAP,ELECT 0.22-50 SME
C54	*87-010-545-019	CAP,ELECT 0.22-50 SME
C55	*87-010-402-019	CAP,ELECT 2.2-50SME
C56	*87-010-402-019	CAP,ELECT 2.2-50SME
C61	*87-010-402-019	CAP,ELECT 2.2-50SME
C62	*87-010-402-019	CAP,ELECT 2.2-50SME
C67	*87-010-402-019	CAP,ELECT 2.2-50SME
C68	*87-010-402-019	CAP,ELECT 2.2-50SME
C69	*87-018-203-019	CAP,CERA-SOL 8200P
C70	*87-018-203-019	CAP,CERA-SOL 8200P
C71	*87-018-203-019	CAP,CERA-SOL 8200P
C72	*87-018-203-019	CAP,CERA-SOL 8200P
C73	*87-010-402-019	CAP,ELECT 2.2-50SME
C74	*87-010-402-019	CAP,ELECT 2.2-50SME
C75	*87-018-133-019	CAP,CERA-SOL SS 4700P
C76	*87-018-133-019	CAP,CERA-SOL SS 4700P
C77	*87-018-133-019	CAP,CERA-SOL SS 4700P
C78	*87-018-133-019	CAP,CERA-SOL SS 4700P
C79	*87-010-402-019	CAP,ELECT 2.2-50SME
C80	*87-010-402-019	CAP,ELECT 2.2-50SME
C81	*87-018-195-019	CAP,CERA-SOL SS 1200P
C82	*87-018-195-019	CAP,CERA-SOL SS 1200P
C83	*87-018-195-019	CAP,CERA-SOL SS 1200P
C84	*87-018-195-019	CAP,CERA-SOL SS 1200P
C85	*87-010-402-019	CAP,ELECT 2.2-50SME
C86	*87-010-402-019	CAP,ELECT 2.2-50SME
C87	*87-018-129-019	CAP,CERA-SOL 680P
C88	*87-018-129-019	CAP,CERA-SOL 680P
C89	*87-018-129-019	CAP,CERA-SOL 680P
C90	*87-018-129-019	CAP,CERA-SOL 680P
C91	*87-010-402-019	CAP,ELECT 2.2-50SME
C92	*87-010-402-019	CAP,ELECT 2.2-50SME
C126	*87-010-421-019	CAP,ELECT 4.7-50VSRE
C201	*87-010-403-019	CAP,ELECT 3.3-50SME
C202	*87-010-403-019	CAP,ELECT 3.3-50SME
C203	*87-018-127-019	CAP,CERA-SOL SS 470P
C204	*87-018-127-019	CAP,CERA-SOL SS 470P
C205	*87-010-403-019	CAP,ELECT 3.3-50SME
C206	*87-010-403-019	CAP,ELECT 3.3-50SME
C207	*87-018-133-019	CAP,CERA-SOL SS 4700P
C208	*87-018-133-019	CAP,CERA-SOL SS 4700P
C209	*87-018-124-019	CAP,CERA-SOL SS 270P
C210	*87-018-124-019	CAP,CERA-SOL SS 270P
C213	*87-018-127-019	CAP,CERA-SOL SS 470P
C214	*87-018-127-019	CAP,CERA-SOL SS 470P
C217	*87-018-197-019	CAP,CERA-SOL SS 1800P
C218	*87-018-197-019	CAP,CERA-SOL SS 1800P
C221	*87-018-133-019	CAP,CERA-SOL SS 4700P
C222	*87-018-133-019	CAP,CERA-SOL SS 4700P
C223	*87-010-545-019	CAP,ELECT 0.22-50 SME
C224	*87-010-545-019	CAP,ELECT 0.22-50 SME
C227	*87-010-401-019	CAP,ELECT 1-50SME
C228	*87-010-401-019	CAP,ELECT 1-50SME
C231	*87-010-402-019	CAP,ELECT 2.2-50SME
C232	*87-010-402-019	CAP,ELECT 2.2-50SME
C235	*87-018-134-019	CAP,CERA-SOL SS 0.01
C236	*87-010-260-019	CAP,ELECT 47-25V SME
C237	*87-010-260-019	CAP,ELECT 47-25V SME
C238	*87-010-260-019	CAP,ELECT 47-25V SME
C239	*87-010-260-019	CAP,ELECT 47-25V SME
C281	*87-018-134-019	CAP,CERA-SOL SS 0.01
C282	*87-018-134-019	CAP,CERA-SOL SS 0.01
C301	*87-010-404-019	CAP,ELECT 4.7-50V SME
C500	*87-018-134-010	CAP,CERA-SOL SS 0.01
C501	*87-010-408-010	CAP,ELECT 47-50V SME
CONN-3	87-009-065-010	CONNECTOR 15P FG
L2	*87-003-136-010	MICRO INDUCTOR 100UH
=== FRONT CIRCUIT BOARD SECTION ===		
C1	*87-010-401-019	CAP,ELECT 1-50SME
C2	*87-018-134-019	CAP,CERA-SOL SS 0.01
C3	*87-010-260-019	CAP,ELECT 47-25V SME
C5	*87-018-134-019	CAP,CERA-SOL SS 0.01
C121	*87-010-404-019	CAP,ELECT 4.7-50SME
C122	*87-010-404-019	CAP,ELECT 4.7-50SME
C123	*87-018-196-019	CAP,CERA-SOL SS 1500P
C124	*87-018-196-019	CAP,CERA-SOL SS 1500P
C125	*87-010-404-019	CAP,ELECT 4.7-50SME
C501	*87-010-408-019	CAP,ELECT 47-50V SME
D3	87-020-862-010	LED,SEL-2213C(MEMORY)
D4	87-001-124-010	LED,SLZ-381C-02 TP45(M1)
D5	87-001-124-010	LED,SLZ-381C-02 TP45(M2)
D6	87-001-124-010	LED,SLZ-381C-02 TP45(M3)
D7	87-001-124-010	LED,SLZ-381C-02 TP45(M4)
D8	87-001-124-010	LED,SLZ-381C-02 TP45(M5)
D9	87-020-862-010	LED,SEL-2213C(PROGRAM)
D10	87-020-862-010	LED,SEL-2213C(MANUAL)
D11	87-020-862-010	LED,SEL-2213C(GEQ)
FL1	81-675-650-010	FL BG-606GK(LEFT CHANNEL)
FL2	81-675-650-010	FL BG-606GK(RIGHT CHANNEL)
L1	*87-003-050-019	COIL,CHOKE 47UH
L3	*87-003-050-019	COIL,CHOKE 47UH
L4	*87-003-050-019	COIL,CHOKE 47UH
SW1	87-036-142-010	TACT SW(GEQ OFF/ON)
SW2	87-036-142-010	TACT SW(40HZ UP)
SW3	87-036-142-010	TACT SW(40HZ DOWN)
SW4	87-036-142-010	TACT SW(2.5KHZ UP)
SW5	87-036-142-010	TACT SW(2.5KHZ DOWN)
SW6	87-036-142-010	TACT SW(1)
SW7	87-036-142-010	TACT SW(FLAT)

REF.NO.	PART NO.	DESCRIPTION
SW8	87-036-142-010	TACT SW(125KHZ UP)
SW9	87-036-142-010	TACT SW(125KHZ DOWN)
SW10	87-036-142-010	TACT SW(6.3KHZ UP)
SW11	87-036-142-010	TACT SW(6.3KHZ DOWN)
SW12	87-036-142-010	TACT SW(2)
SW13	87-036-142-010	TACT SW(PRGM/MANUAL)
SW14	87-036-142-010	TACT SW(330HZ UP)
SW15	87-036-142-010	TACT SW(330HZ DOWN)
SW16	87-036-142-010	TACT SW(15KHZ UP)
SW17	87-036-142-010	TACT SW(15KHZ DOWN)
SW18	87-036-142-010	TACT SW(3)
SW19	87-036-142-010	TACT SW(MEMORY)
SW20	87-036-142-010	TACT SW(1KHZ UP)
SW21	87-036-142-010	TACT SW(1KHZ DOWN)
SW22	87-036-142-010	TACT SW(GEQ SPECTRUM)
SW23	87-036-142-010	TACT SW(5)
SW24	87-036-142-010	TACT SW(4)
X1	*87-030-167-010	CERALOCK CST 4.0MHZ

PRACTICAL SERVICE FIGURE (GE – D9)

S/N Ratio :	More than 72dB
(1kHz, -10dBm, GEQ flat A CURVES)	
Distortion :	Less than 0.05%
(1kHz, -10dBm, GEQ OFF)	
Distortion :	Less than 0.05%
(1kHz, -10dBm, GEQ flat)	
Separation :	More than 63dB
(1kHz, -10dBm, GEQ flat)	
Frequency response :	-1.5dB±2dB
(20Hz, -10dBm, GEQ flat)	
Frequency response :	0±2dB
(30kHz, -10dBm, GEQ flat)	
Graphic equalizer characteristic :	40Hz~15kHz
(Boost level)	More than 9dB
Graphic equalizer characteristic :	40Hz~15kHz
(Attenuation level)	More than 9dB

○Set the boosting and attenuation of the bands other than that to be measured to zero.

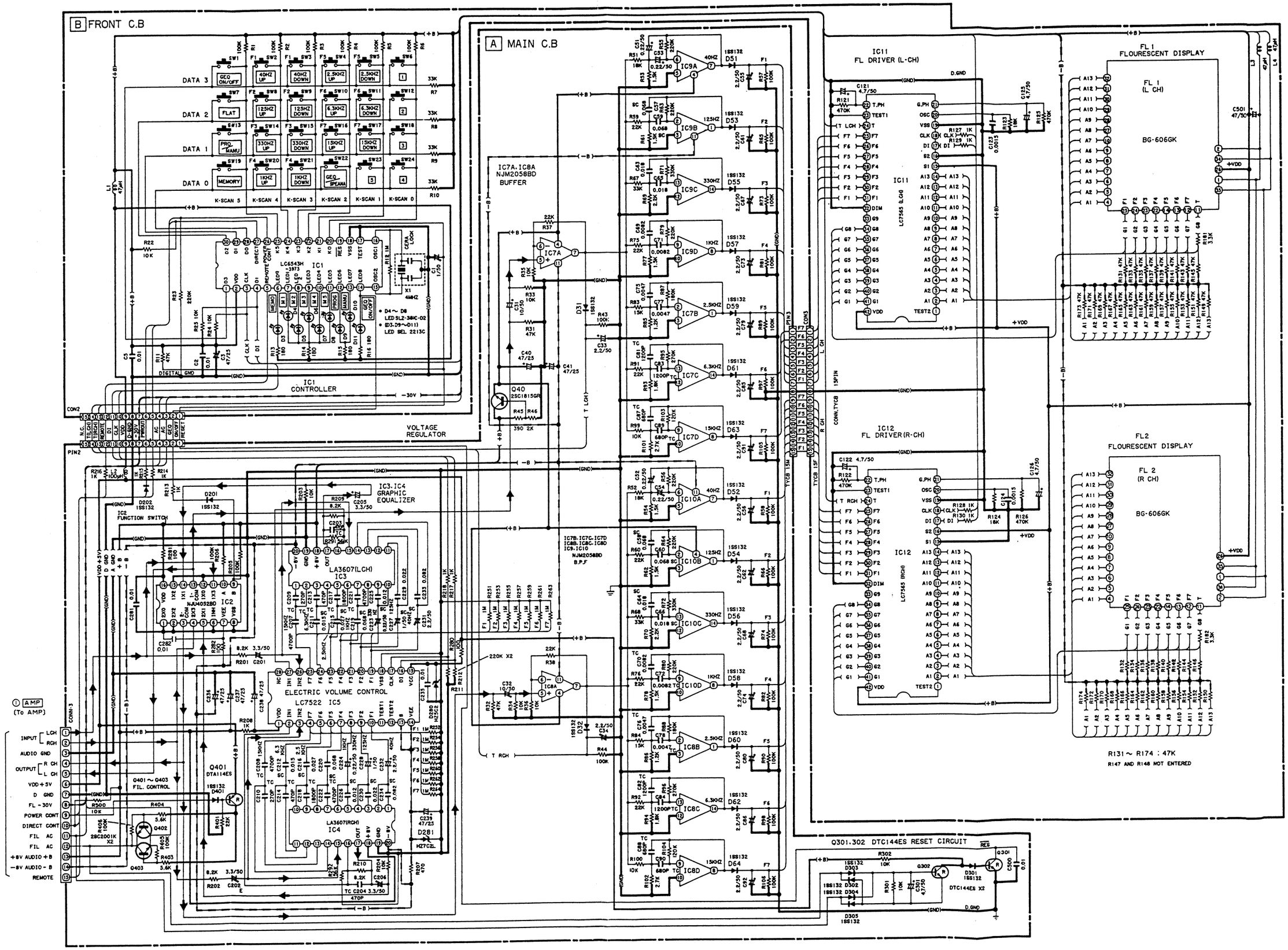
Spectrum analyzer overall level adjustment :	
(1kHz, GEQ flat)	0.38V±0.15V (Input level which lights "0")
Spectrum analizer display sensitivity :	
(Resonance frequency of filter, GEQ flat)	0.27V±0.15V (Input level which lights "+12")

IC DESCRIPTION (GE – D9)

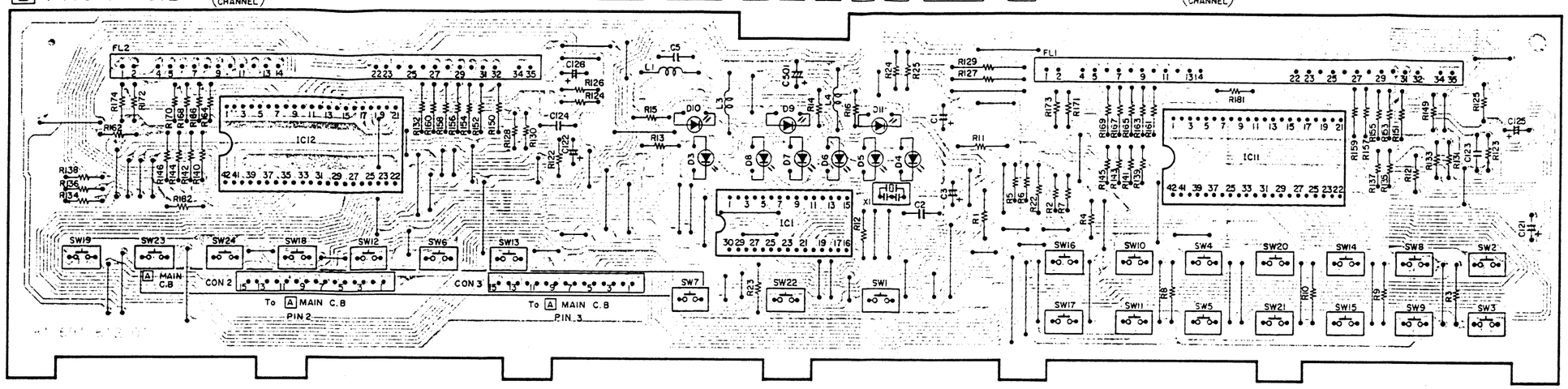
IC, LC6543H

Pin No.	Pin Name	I/O	Description
1	D3	I	(Data-3 Line) : ●Normally set to "H". When a key on this line is pressed, the key scan data is read.
2	VDD	–	●Power supply pin.
3	CLK	O	(Clock line) : ●Active "H". ●Generates a clock signal momentarily accompanying key operation when the GEQ (graphic equalizer) is on.
4	DI	O	(Function control main data line) : ●Active "H". ●Operate together with the clock signal to control the functions of IC7522 and IC7565.
5	REMOTE	I	(Remote line) : Reads the data transferred from the remote control.
6	LED9	O	(MEMO LED) :
7	LED1		(M1 LED) :
8	LED2		(M2 LED) :
9	LED3		(M3 LED) :
10	LED4		(M4 LED) : ●Active "L".
11	LED5	O	(M5 LED) : ●These pins drive the LED function indicators.
12	LED6		(PROG LED) :
13	LED7		(MANU LED) :
14	LED8		(GE ON/OFF LED) :
15	OSC_2	–	Clock oscillating pins, connected to a ceramic oscillator.
16	OSC_1		
17	TEST	–	Connected to Vss.
18	Vss	–	Digital ground of the microprocessor's power supply.
19	$\overline{RES}$	I	●Initializes the microprocessor. ●Active "L".
20	K0	O	(K-scan 0 line) :
21	K1		(K-scan 1 Line) :
22	K2		(K-scan 2 line) : ●These pins output key scan pulses to be supplied to
23	K3		(K-scan 3 line) : the K-scan lines of the key matrix.
24	K4		(K-scan 4 line) :
25	K5		(K-scan 5 line) :
26	POWER CONT	I	(Power control line) : ●Active "H". ●"H" input switches off the indicators, etc.
27	DIRECT	I	(Direct control line) : ●Active "L". ●Goes "L" when the DIRECT button of the amplifier is turned on, and no audio signal passes through the GEQ circuit. No operation key inputs are accepted from the GEQ.
28	D0	I	(Data 0 line) : (Data 1 line) : ●Normally set to "H". Receives key scan data when the keys on these lines of the matrix are pressed.
29	D1		
30	D2		(Data 2 line) :

SCHEMATIC DIAGRAM (GE – D9)



B FRONT C.B



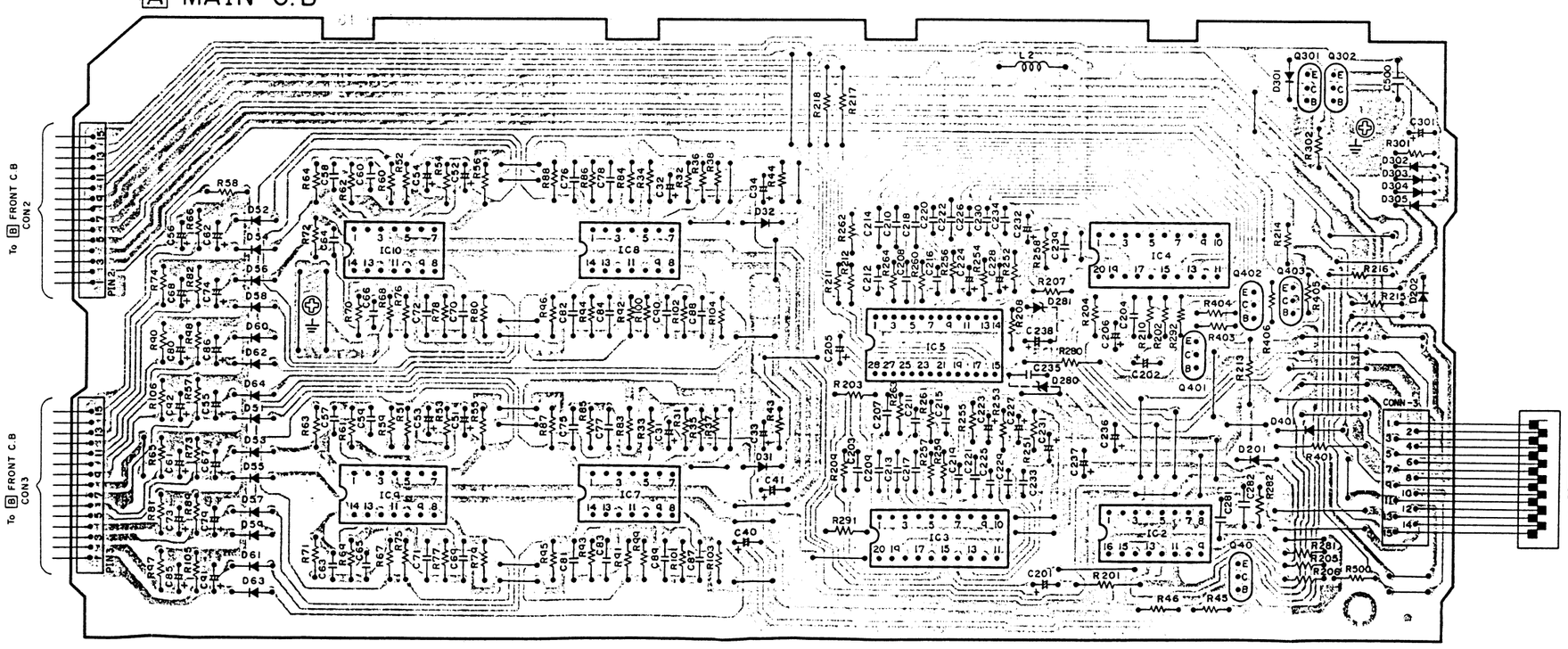
DIO MANUAL · D3 MEMORY · D8 M5 · D7 M4 · D6 M3 · D5 M2 · D4 M1 · D9 PROGRAM · DII GEQ

SW19 MEMORY · SW23 5 · SW24 4 · SW18 3 · SW12 2 · SW6 1 · SW13 PROGRAM / MANUAL

SW7 FLAT · SW22 GEQ SPECTRUM · SW1 GEQ OFF/ON

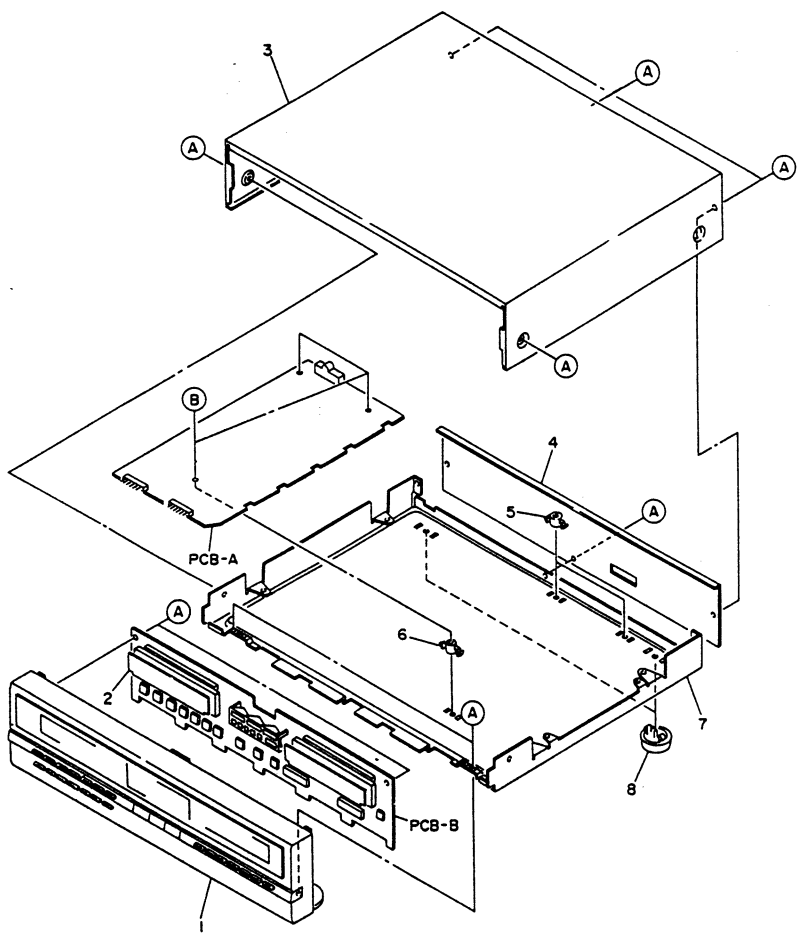
SW16	SW10	SW4	SW20	SW14	SW8	SW2
UP	UP	UP	UP	UP	UP	UP
15KHz	6.3KHz	2.5KHz	1 KHz	330Hz	125Hz	40Hz
SW17 DOWN	SW11 DOWN	SW5 DOWN	SW21 DOWN	SW15 DOWN	SW9 DOWN	SW3 DOWN

A MAIN C.B



EXPLODED VIEW – 1 (GE – D9)

REF.NO.	PART NO.	DESCRIPTION
A	87-067-660-01	BVT,+3-8(B)
B	87-761-099-41	VFT,+3-15



MECHANICAL PARTS LIST (GE – D9)

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-1	*09-047-455-010	CABINET FRONT ASSY(D9Y,YK)	*	1
	1-1	*09-047-456-010	CABINET FRONT ASSY(D9YU)	*	1
	1-2	*81-675-005-010	FILTER FL		2
	1-3	*81-691-017-010	CABINET STEEL(D9YN,YJ,YU)	*	1
	1-3	*83-313-003-118	CABINET STEEL(D9YNE)		1
	1-3	*81-666-015-110	CABINET STEEL(D9Y,D9YK)		1
	1-4	*81-691-011-010	PANEL REAR(D9YN,YK)	*	1
	1-4	*81-691-018-010	PANEL REAR(D9YNE)	*	1
	1-4	*81-691-015-010	PANEL REAR(D9YU)	*	1
	1-4	*81-691-019-010	PANEL REAR(D9YJ)	*	1
	1-5	*81-664-202-010	HOLDER PCB		2
	1-6	*81-691-201-010	HOLDER PCB(7.15)	*	1
	1-7	---	CHASSIS AMP		1
	1-8	*81-675-010-010	FOOT H10		2

MODEL NO.

SX – E9,U9

■ SPEAKER LIST (SX – E9)

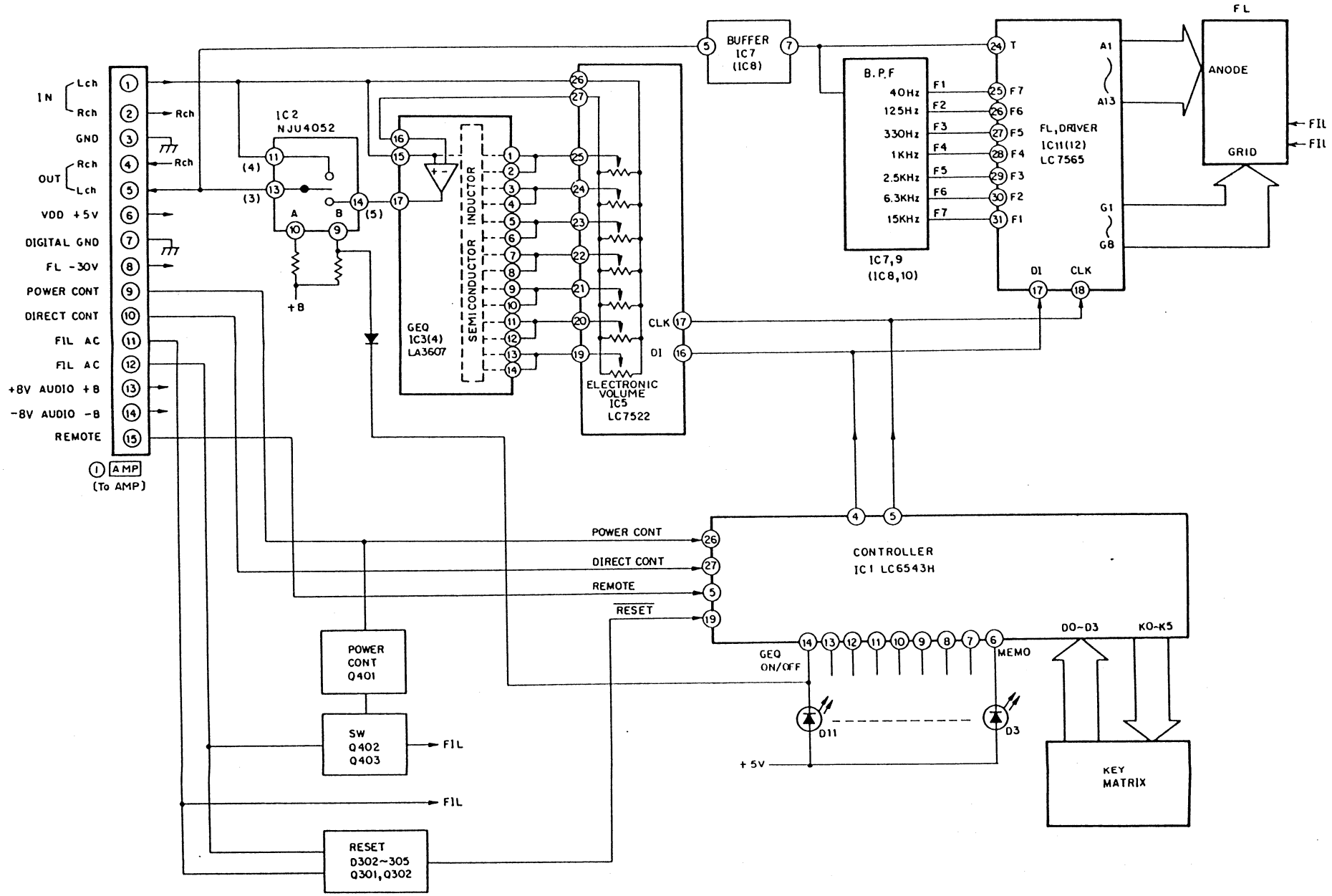
PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1	*81-695-003-010	PANEL WOOFER		1
	2	*81-695-004-010	PANEL SQUAWKER		1
	3	*81-695-005-010	PANEL TWEETER		1
	4	*81-695-032-010	GRILL FRAME ASSY		1
	5	81-695-603-010	SPEAKER TWEETER		1
	6	81-695-608-010	SPEAKER WOOFER		1
	7	81-654-605-010	TWEETER CERAMIC		1
	8	*81-672-612-010	SPEAKER CORD		1

■ SPEAKER LIST (SX – U9)

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1	*81-695-003-010	PANEL WOOFER		1
	2	*81-695-006-010	PANEL SQUAWKER ASSY		1
	3	*81-695-007-010	PANEL TWEETER ASSY		1
	4	*81-695-029-010	GRILL FRAME ASSY		1
	5	81-695-617-010	SPEAKER TWEETER		1
	6	81-695-615-010	SPEAKER WOOFER		1
	7	81-695-618-010	TWEETER CERAMIC		1

■ ACCESSORIES/PACKAGE LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1	*83-342-905-019	INSTRUCTION BOOKLET U(900U)	*	1
	2	*83-354-905-019	INSTRUCTION BOOKLET U(909U)	*	1
	3	*83-342-904-019	INSTRUCTION BOOKLET S(900E,Z)	*	1
	4	*83-354-904-019	INSTRUCTION BOOKLET H(909E)	*	1
	5	*81-689-904-019	INSTRUCTION BOOKLET K(900K)	*	1
	6	*81-653-647-010	AM-LOOP ANT(6T) CON(900E,K)		1
	7	*81-653-645-010	AM-LOOP ANT(6T) NC(900U,Z)		1
	8	*81-748-632-010	FM FEEDER ANT M(900U,E,K)		1
	9	*81-694-015-019	RC-T9FYBN(900U)		1
	10	*83-334-010-019	RC-T909FYBN(909U)		1
	11	*81-694-016-019	RC-T9LYBN(900E,K,Z)		1
	12	*83-334-011-019	RC-T909LYBN(909E)		1
	13	*81-664-619-010	CONN ASSY,11P(FG)		1
	14	*81-689-650-010	CONN ASSY,15P(GE)		1
	15	*81-689-651-010	CONN ASSY,13P(CD)(909)		1


IN
Lch
Rch
GND
OUT
Rch
Lch
VDD +5V
DIGITAL GND
FL -30V
POWER CONT
DIRECT CONT
FIL AC
FIL AC
+8V AUDIO +B
-8V AUDIO -B
REMOTE
AMP
(To AMP)
IC2
NJU4052
A
B
+B
GEQ
IC3(4)
LA3607
SEMICONDUCTOR INDUCTOR
ELECTRONIC VOLUME
IC5
LC7522
BUFFER
IC7
(IC8)
B.P.F
40Hz
125Hz
330Hz
1KHz
2.5KHz
6.3KHz
15KHz
IC7,9
(IC8,10)
FL,DRIVER
IC11(12)
LC7565
FL
ANODE
GRID
FIL
FIL
CLK
DI
CONTROLLER
IC1 LC6543H
POWER CONT
DIRECT CONT
REMOTE
RESET
GEQ ON/OFF
MEMO
D11
D3
+5V
D0-D3
K0-K5
KEY MATRIX
POWER CONT Q401
SW Q402 Q403
FIL
FIL
RESET D302~305 Q301,Q302